certained and recorded on the basis of existing practice. I found it a useful help in sharpening at once the wits and attention of the zamíndárs, to collect two or three villages at the same time, grouping the men of each village together, and distributing them toward different points of the compass. Then with a writer for each village the questioning began, the same question being asked, in succession of the several sets of villagers. I found that by listening to the accounts given by their neighbours their comprehension of what was going on was materially improved, while the rapid despatch of work was facilitated. The Extra Assistant attested some of the villages in Ballabgarh, and I attested several myself in each of the three pargannahs. I think that on the whole this important branch of the attestation work was well and honestly done. The plan of all the papers in the district was uniform; wherever the subject matter of any particular section was not required for any village, the fact was to be stated in the proper place. I think this is well, for it ensures regularity: and it guards against the idea which might perhaps be entertained hereafter that the point had been overlooked.

The work of attestation was completed by the end of December 1879.

Para 204. Government rights to minerals how attested.

§ 16. Before leaving the subject of the administration paper, I mention separately the matter of Government right to mines and quarries as attested therein. As a general rule (see Chapter II) the only mineral that is dealt with in this connection is kankar, and the right to dig for this has been stipulated for on the part of Government. Proprietors wanting it for their own use can dig after getting the permission of the Deputy Commissioner. This permission should not ordinarily be, refused. The same will be the case with stone. But it is right to mention that in Molarband it appeared that the zamíndárs had in practice excavated and sold stone for a good many years: their right to do so was accordingly maintained. In Arangpur there was difficulty about the crystal mine. The zamíndárs knew they would never work it themselves; but after reading the letter referred to in Chapter I, on the chance of finding gold in the village, I wished to make particularly sure that no question should hereafter be possible. The zamíndárs however did not consent to any thing more explicit than what was entered before, so I referred the subject to the Financial Commissioner, asking to be allowed if necessary to cancel the settlement made with the village, and insist on

Molarband,

Arangpur.

their executing a differently worded administration paper as a condition of accepting their 'darkhwást málguzárí.' The officiating Financial Commissioner, however, did not think this necessary. The entry as at present allowed is merely that the 'mine is closed.'

Chalk-pits in certain villages.

In the villages of Kasumpur, Malikpur Kohi, and Mahraulí, the zamíndárs enjoy revenue (if any) from chalk-pits.

Para 205.

'Malba' in the administration paper.

§ 17. The subject of village expenses (Malba) also deserves mention. The management of these vests with the lambardárs, but their control is not so irresponsible as of old: the proprietors in many villages show an increasing desire to know more about the details of expenditure than before, and the amount which they are willing should be spent by the lambardárs is becoming more limited. In sixteen villages the sum was actually mentioned in the Wajib-ul-arz. A sample of the year's expenses and its objects is given in Appendix XVII.

Para 206.

Attestation of the Riwáj-i-ám.

§ 18. The attestation of the tribal customs of the district has not been done as much by myself in person as I wished. It was a work to which I had looked forward with the deepest interest, but after I had attested the papers of the Jats, Gujars and Brahmins, and one or two other tribes, I broke down and had to take short leave. Meanwhile the work could not be delayed a day; indeed on account of the numbers of lambardárs summoned on fixed days an adjournment would have been difficult, without thinking of any other reasons against deferring the matter. So the Extra Assistant had to finish up: he knew my way of doing it, and the various points on which I considered special care and repeated enquiry necessary, and I have no doubt the results as worked up by him will show a good working record.

Para 207.

Fairing of the record.

§ 19. The 'janch,' or examination of the rough attestation papers, and of the rest of the record, as drawn up in the rough, was made in the office of each superintendent, and there also the first faired copy of the complete record was made: in this district this first copy is called the patwárís copy. From this again, after examination by a separate establishment under the Extra Assistant, was faired the second copy, which will remain the Government copy and has been filed in the district office. The fairing of the Patáwrís copy, was done by the best among the patwárís and by Muharrirs, paid either from settlement fees, or the surplus collections under the patwárís cess. The fairing o

the second or Government copy was done by contract under supervision of the Extra Assistant. I have now had a good deal of experience of this way of working, and am able to regard it as on the whole satisfactory. Sharply followed and looked after, the contractor finds no means of scamping the work; it is just as easy to write correctly as not, and as the remuneration depends on the amount done, as well as its quality no delay is made that can possibly be avoided. I do not believe many mistakes will be found—some of course must be.* The scale of payment was moderate but liberal, as I took great pains to ascertain what work really could be done at certain rates; and we finished off much more expeditiously than, I am convinced, would have been possible under the system of muharrirs paid merely by the month.

Style of execution.

As regards style of execution my aim, as in other things, was to make a fair working record rather than an ornamental one. I have, therefore, always insisted on a clear handwriting more than on anything else, and though I do not think the papers will be found slovenly, I did not care greatly for ornamental caligraphy. The paper is moderately good; I did the best I could, and every Settlement Officer knows how his soul is vexed about paper. The binding was done at 12 annas per volume, and I think it is cheap; and quite as good as we want. The field maps are fair, and the 'shajra nasbs' genealogical trees are most of them good.

Alterations.

About alterations—I never hesitated to make these in the patwárís copy, carefully attesting them under the superintendent's signature. Erasures I set my face against, and though a few may have escaped notice, I believe they were for the most part done away with eventually; they certainly brought in much money in the shape of fines: certain kinds of technical shortcomings,—I can hardly call them errors which in their nature were so trivial as not to be worth correction,—I ordered, when discovered in the patwárís' copy, to be noted for avoidance in the Government copy—and left them in the other. But these are absolutely trifling in importance and few in number.

Para 208.

Distribution of fair parchas of holdings.

§ 20. The distribution of the faired 'parchas' of holdings is still being made while I write, but there is nothing to hinder its completion. The 'parchas' have been made up, as in Gurgaon, in neat little books quite good and strong

* While this is going to press I have heard that in some cases sheets have been left out in the Government copy. I hope, however, that this will have been set right before this appears in print. The mistakes probably are those of the binder rather than the writer who gets paid by the piece.

enough for the purpose. It seems worth mentioning that the calculation of the fees to be charged for these statements has been made 'khátawár,' *i. e.*, on cultivating holdings and not 'khewatwár'—on proprietors' holdings. This was against my reading of the rules, but it was ordered both in Gurgaon and Delhi. The estimate of the amount to be levied on this account, sent to the Deputy Commissioner for realisation, is Rs. 66,140/- made up thus: for proprietors, Rs. 54,897/8/-; tenants with right of occupancy, 6,995/-; mortgagees in possession, Rs. 4,247/8/-.

Amount thus to be realised.

Para 209. Village statements.

§ 21. The village statements, written in English throughout, are bound up in eight large and handsome volumes, quite fit to be read by a Deputy Commissioner! Ballabgarh took three, Delhi three, and Sunipat two. In each first volume of the tahsíl there is a good map showing the assessment circles, and the villages. The latter have three numbers marked on them—one that of Form E. (black); that of the 'kistbandí' sent to the Deputy Commissioner (blue); and that of the statements themselves with the volume's number also. I have taken pains to make these books a full and trustworthy guide to the district officer; there is plenty of room for him to write up any subsequent facts, and as for corrections I should be very thankful for them. I would suggest that the Commissioner might ask for a note, in the revenue report of the district, as to the use made of the village statements during the year.

Will the D. C. kindly add to and correct them.

Para 210. No separate record of rights in water-courses.

§ 22. In this district no separate record of rights in water-courses has been drawn up. The matter was taken into consideration both here and in Gurgaon. In the latter district a trial was made on the Agra Canal in Palwal, but the results were unsatisfactory, and it was stopped by permission of the Commissioner. In Delhi I took the same action.* The system of distributaries on the Western Jamna Canal owing to the great changes of alignment and level of irrigation will almost immediately be so modified as virtually to become new. Under these circumstances no records that we could make would be of practical use; they would but cause more litigation and quarrelling than would exist without them. This course was approved of by the officiating Financial Commissioner with regard to the Western Jamna Canal, but further report was required explaining why, for the hill

1.—Why not, on the Jamna Canal.

* I have just before submitting this heard that some misguided muharrirs in Delhi tahsíl have even, in the faired record, entered the fact of separate record having been prepared. This should not have been done but the errro having been noted here, will, I hope, do no harm.

streams in both districts, irrigation records should not be prepared as in the Shahpur Settlement. In my No. 754 of 23rd December 1879 I gave this explanation. 'The normal case' I remarked 'of a village in these two districts, irrigable by 'hill-water, is that the water comes and goes as it pleases— 'no one stops it, no one thinks of quarrelling with his neigh- 'bour about what is so evidently an event out of his control, 'as the downward rush of water over his land. Whatever ''bands' already exist are noted in the wájib-ul-arz of their 'respective villages, and it is well understood, as I have as- 'certained by personal enquiry, that no one has any right to 'alter the *statu quo*. If any attempt is made the offender 'is punished by *criminal* complaint, thus showing well how 'the present state of things is based on recognised practice. 'To do any thing here in the way of recording rights might 'be to stir up strife where at present there is none.' This explanation was allowed as sufficient by the Financial Commissioner.

2.—Why not, in the case of irrigation from hill-waterstreams

Para 211.

Maps of the ábádí.

§ 23. The question had been raised, by a reference from the Deputy Commissioner Karnal, whether the making of a map of the village site should form part of the settlement operations. Colonel Babbage had seemed to think the map necessary to the carrying out of a scheme of his for numbering the houses in each village, but, as the Financial Commissioner remarked, the two things did not appear necessarily connected, and eventually, after a recommendation from the Commissioner that the maps should be made by the Settlement Officer at the close of settlement, it was ordered that the matter should at all events for the present stand over. If the Settlement Officer found, at the end of the settlement, that he could do this he might, but it was not to hinder his proper and special work—(No. 8,411 of December 1874 from Secretary to Financial Commissioner to Commissioner Delhi). The opportunity of carrying out this measure has not been found, though I have thought of it more than once. I am not at all fanatically disposed to shut out every thing connected with the village site from the range of settlement officials, though with a task like the Delhi District before them they would not be justified in taking up any thing but essentials. At the end of the settlement, too, we have been much occupied with the 'girdáwarí' work, which we undertook in order to start the annual papers for the district, and this really made any other additional task impossible. I would suggest, however, now that the patwáris are comparatively free, they might well be put to the work, or selected men might be deputed for it, under the super-

Not found time for.

vision of one of the several 'girdáwars' appointed in each tahsíl. A carefully drawn map of the 'ábádí' would certainly be a boon to the zamíndár, and might prevent a good many disputes.

Para 212. The preservation of rough attestation papers.

§ 24. On the question of preserving the rough attestation papers, orders were issued generally in Settlement Secretary's No. 4,894, of 10th July, 1879. By these orders all the 'chittas' will be preserved at least six years, that is to say for as long as, practically, entries in the record will be disputed. I recorded my opinion emphatically against this, and I still think that, if the fact becomes widely known, it will provoke needless litigation. The first requisite of the Delhi Settlement, after its tedious and costly duration of 8½ years, would seem to be finality, or that degree of finality which may legally attach to its records. It is not necessary for this claim to be made good, to vaunt those records as perfect. I certainly should be the last person to do this; but I am convinced that in the immense majority of cases generally, and in a very large majority of cases under dispute, the entries now made represent the real facts, and that it is unwise and impolitic to lend any adventitious aid to an attack on them, or to preserve any papers which might seem to encourage such an attack on them. The 'chitta' for the most part is much disfigured; in many cases it will be illegible: and he will be a bold judge who will rely on an entry in it to discredit the faired papers. Of course such a thing is possible as that a mistake is made in copying, and that in the 'chittá' this particular place is clear—but it is only just possible. However the papers have all been carefully despatched to the office without the least tinkering; so they can be used in their native worth.

Para 213. Papers composing the settlement record.

§ 25. The papers composing the vernacular records now filed in the district office are as follows:—

1.—Index of the papers, (Fihrist kághazát).

2.—The field map, (Shajra kishtwár).

[This is folded up and put in the case on one side.]

3.—The field register (Khasra paimáish kishtwár).

4.—Register of Rights and Liabilities, (Khewat khatauni).

5.—Alphabetical list of the village proprietors (Fihrist radífwár málikán).

6.—Alphabetical list of tenants with rights of occupancy (Fihrist radífwár mazárián maurúsí).

7.—Statement of assigned property, (Fard lákhiráj).

8.—Genelogical table of proprietors, (Shajra insáb wa hakkúk málikán).

[This is also folded up and put in the other side of the case.]

9.—List of wells and statement of rights in each (Naksha hakkúk cháhát).

10.—Tender for engagement of revenue (Darkhwást ta'ahud málguzárí).

11.—The administration paper (Wájib-ul-arz).

12.—Final proceeding (Rúbakár ákhír).

Naksha cháhát

I do not think any further explanation is required of these. The 'naksha cháhát' contains particulars, among other things, of the construction, condition and practice of irrigation for every well. The 'tender for engagement of revenue,' in the copy filed in the district office, is signed by me, with the amount of revenue in each case; but, where the revenue was afterwards modified in appeal, or on my own few cases of review, the correction is made only in vernacular. In the printed form of the index the eleventh paper is said to include a statement of the tribal custom of the village, but as it has been directed that the 'riwáj-i-ám should not be considered a record, this has been omitted for fear of misleading officers as to the authority of the paper drawn up on that subject. The final proceeding includes a list of the judicial powers given to Settlement Officers, and the cases affecting the village decided during settlement under those powers. This leads me to notice the judicial work of the settlement.

Final proceeding.

Para 214.

Judicial work of the settlement.

§ 26. In Appendix XVIII will be found a list (I believe complete) of the powers given to the various officers with the notifications in which they appeared: and in Appendix XIX is given a statement of the revenue and judicial case work done during the settlement. The cases under A (ordinary suits for rights) were not numerous, by far the greatest proportion being in Ballabgarh, as might be expected, from the greater number of villages there coming now under regular settlement for the first time. The same is the case with suits under class B. (suits under the tenancy act). The total number of judicial cases decided under A. and B. is 2,881. Under C., revenue cases, we show the considerable total of 30,289, but of these 23,654 were

Revenue cases.

mutation cases. The work under this head was much increased by the transfers of title on the taking up of land for the new Delhi Branch of the Western Jamna Canal. The appointments of zaildárs have not been shown (as perhaps they should,) but this does not greatly matter—there were 44 of these. The patwárís would appear to have passed through a long set of vicissitudes, and reproaches of one kind or another, as the cases affecting them reach the enormous number of 1004. Taking 8½ years as the duration of settlement, operations, it results in giving a case, about one or other of the 222 patwárís in the district, every three days on the average! or 118 cases every year. The greatest number was 233 in 1876-77 when a multitude of complaints were made about wrong entries in measurement; a favourite one being that the patwárí had through enmity put the village into a superior chak, or in entering the kinds of soil in the paper had metamorphosed 'bhur' into 'rausli,' or 'bárání' into 'chahí' land. A reference to Chapter XII will show that a good deal was done in the way of punishing patwárís from time to time, but I did not know that they had been through such a running fire of adverse criticism as is indicated by these figures: however, they deserved it all.

Vicissitudes of patwárís.

Beside the cases shown as decided, a few were transferred to the district, or decided, after the drawing up of the statement.

Para 215.

Expenses of the settlement

§ 27. In closing this account of the settlement operations I must touch on the melancholy subject of expenses of the settlement. These will be shown most clearly under two heads, according to the sources whence they were drawn. A—the sanctioned budget under Imperial and Provincial Services:—B—non-sanctioned establishment paid from Settlement Fees. It is true that, latterly, advances to be repaid from 'parcha' Fees were put into the budget, but this was only a matter of accounts, and does not affect the substantive question of the correct adjustment of Settlement Fees expenditure. It should be noted that I reckon expenditure under head A. only up to July 31st, when settlement operations were virtually closed, though several members of the sanctioned establishment were retained at Delhi some months longer for want of employment elsewhere. This occurred owing to reductions being made in the general settlement establishment of the Province.

Para 216. Imperial and Provincial Services.

§ 28. The expenses under Imperial and Provincial heads have been drawn in ten years,* begininng in January 1872, and ending July 31st, 1880: they amount to Rs. 4,81,699/8/9, thus averaging Rs. 56,120/4/5 for the full year of twelve months. The details are given under the various heads in para. 217 and seem to need little explanation. The pay of Gazetted Officers increased of course when an Extra Assistant was appointed, and again when the Settlement Officer was advanced to the rank of a Deputy Commissioner. From January 1878 there was a material decrease under this head. The pay of the Settlement Officer and that of the Assistant Settlement Officer were added together, and half of the aggregate was debited to Delhi, half to Gurgaon. This was only slightly less than if my pay had been debited to the one, and Mr. Wilson's to the other (Gurgaon) and seemed on the whole fairest. The pay of the establishment, it will be seen, was steady at about Rs. 28,000/- a year.

'Allowances.'

The item of 'allowances' was an addition made to the pay of his subordinates by the Settlement Officer as reward for good service; it was disapproved of by the Government and discontinued accordingly.

Travelling allowances.

The amounts entered under travelling allowances of Gazetted Officers vary considerably, but it must be remembered that Mr. Wood, for a portion of the time he held charge, drew no travelling allowance for his journeys, it having been ruled that he could not, drawing the pay he did. My own travelling was very extensive, more so than actually appears from the statement here given, as half of the amount was charged to Gurgaon in the same way as with the substantive pay.

The charge for country stationery was largest in 1879-80, on account of the fairing and binding of the records then specially occupying attention. The same may be said of the printing of papers.

Para 217.

§ 29. The details of expenditure from Imperial and Provincial Services are as follows:—

* That is, reckoning by the financial year.

Details of Imperial and Provincial Service grants.

Statement of Expenditure of the Settlement Department Delhi District from Imperial and Provincial Services from 1871-72 to 31st July 1880.

YEAR.	Gazetted Officers.			Office and field establishments			Travelling allowance of Gazetted Officers.			Travelling allowances of office and field establishments.			Contingencies (cloth for genealogical tables, paper and other country stationery, office rent, official postage, &c.)			Printing.			TOTAL.			REMARKS.
1871-72	4,306	1	6	4,186	...	...	55	...	...	65	13	2	3,690	14	8	73	2	...	12,376	15	4	
1872-73	21,911	2	2	25,042	7	6	461	...	...	2,066	10	3	3,735	11	2	26	8	..	53,243	7	1	
1873-74	21,066	10	...	26,333	15	2	479	...	...	1,439	2	2	4,582	9	7	202	2	7	54,103	7	6	
1874-75	23,394	9	4	26,428	10	1	320	4	...	1,557	3	4	5,337	14	7	20	3	...	57,058	12	4	
1875-76	23,200	...	...	27,581	13	7	73	...	...	1,508	14	5	2,404	10	10	...	...	...	54,768	6	10	
1876-77	26,880	6	...	30,136	8	11	174	9	4	1,258	5	1	4,671	13	11	211	...	10	63,332	12	1	
1877-78	23,512	12	10	31,015	9	4	704	4	...	1,565	7	9	5,282	5	9	483	2	7	62,563	10	3	
1878-79	13,891	9	10	30,820	13	7	1,257	...	...	1,242	6	7	5,994	13	9	373	15	7	53,580	11	4	
1879-80	14,679	2	7	31,557	1	9	1,115	13	3	1,078	2	...	8,484	10	3	1,265	12	2	58,180	10	...	
1880-81	1,500	...	...	9,185	...	4	24	...	...	467	12	9	1,309	14	10	4	...	1	12,490	12	...	
TOTAL ...	1,74,342	6	3	2,42,288	...	3	4,663	14	7	12,249	13	6	45,495	7	4	2,659	14	10	4,81,699	8	9	

Para 218.

Settlement Fees.

§ 30. The expenses up to date of writing this under the head of Settlement Fees have been Rs. 1,43,969/15/9/-; including a sum of Rs. 2,000/- which I propose to appropriate for the purpose of printing this report and its accompanying maps.

Mode of disbursing sums under this account.

The accounts of disbursements under this head have, since January 1878, beside the check supplied by the Accountant General's Department on the amount of cheques drawn, been kept under my personal superintendence in English and Urdu; and as I never signed a cheque except after closely scrutinising its details and the orders on which it was drawn, I am able with confidence to say that the money has been carefully spent. Before 1878 there was no English account of these expenses kept, but I went into the názir's books and had a consecutive statement drawn up for every month so as to join on to my own book, and the details now are clear throughout, in English.

Chief items of expenditure

The chief items of expenditure were those of the non-sanctioned establishment maintained in each tahsíl for the examination (jánch) of the papers, and the muharrirs employed under the contractors for fairing the Government copy of the record. Latterly a special establishment was formed under the Extra Assistant Settlement Officer for final examination and passing of the papers as correct. The average monthly bill for non-sanctioned establishment was about Rs. 1,500/. Other items worthy of mention are Rs. 30/- a month for rent of the Superintendent's Office in the sadr tahsíl, Rs. 60/- a month for two Translators in the English Office, and a sum of Rs. 2,000/- or thereabouts spent in making up the 8 anna 'parcha' books. I give here a general statement of accounts of money actually received in, and paid away from, the settlement fees account 1872—80.

RECEIPTS.				DISBURSEMENTS.			
1.—6 pie Parcha fees	3,483	8	0	1.—Expenditure under abstract bills regularly controlled by the Accountant General's Department	58,837	7	6
2.—Fines on Establishment	2,604	11	7				
3.—Surplus collection of patwáris' cess over patwáris' pay, and fines on patwáris	70,844	14	3	2.—Expenditure by order of Settlement Officer from Settlement Fees deposit account, the whole of which, together with the totals of the abstract bills above noted, is given in detail in the English Settlement Fees Account	70,886	3	8
4.—Mutation Fees	3,878	13	7				
5.—Fines on lambardárs	427	0	0				
6.—* Advances received from Government on the security of 8 anna Parcha fees (1)—Rs. 8,000/- (special sanction) (2)—Rs. 8,000/- (special sanction) (3)—Rs. 50,837/7/6 (in yearly budgets duly sanctioned)	66,837	7	6	3.—Paid to Government in part repayment of advances	7,207	4	6
7.—Miscellaneous income (sale of waste paper, &c.,) ...	710	8	6	4.—Spent on account of the canal department† in excess of receipts	7,039	0	1
8.—Collected on account of 8 anna fees by mistake ...	21	0	0				
TOTAL ...	1,48,807	15	5	TOTAL ...	1,43,969	15	9
Balance to be accounted for					4,837	15	8

* These advances were received on the security of the 8 anna Parcha fees to be received for the copies of holdings distributed at the end of the Settlement. This amount has already been stated in para. 203 as Rs. 66,140/- which, with the balance now in hand in the deposit account, will be credited to Government.

† This work I undertook in Delhi and Rohtak both. The accounts stand as follows :—

Spent in Delhi	9,862	6	2
Spent in Rohtak	3,176	9	11
TOTAL	13,039	0	1
RECEIVED	6,000	0	0
BALANCE	7,039	0	1

The actual balance at my credit on the 22nd November 1880, was Rs. 13,086/14/7 of this Rs. 3,747/11/6 is the amount realised from jagírdárs on account of their share of the expenses of the settlement and erroneously credited to the settlement deposit, and Rs. 891/13/10 is money of the Gurgaon Settlement Fees account which is surplus in that settlement. The real balance therefore was Rs. 8,447/5/3— since then Rs. 4,563/0/4 has been spent, and Rs. 939/5/9 received, leaving the balance Rs. 4,823/10/8. The Rs. 14/5/0 deficit is money which should have been credited to my deposit, but has been erroneously credited to Government.

CHAPTER XI.

The Assessment.

Para 219.

The work of assessment partly mine, partly Mr. Wood's.

§ 1. The work of assessment, as might be inferred from the general notice of settlement operations, given in the preceding Chapter, was in a great measure mixed. Mr. Wood submitted the revenue rates reports for Ballabgarh and Delhi, and left his village note books for those two tahsíls containing the autograph record of his inspections village by village. Before announcing the detailed assessments, however, I had to go over them carefully in revision, with reference to the Government orders passed on the rates report which made this necessary, especially in Ballabgarh where, as will be seen below, some alterations in Mr. Wood's rates were made by the Commissioner and finally sanctioned. The general effect of this revision, which, in the case of Ballabgarh, was made on very short acquaintance with the district, was to lower the jamas assessed by Mr. Wood slightly in several circles, and a good deal in the Kohí circle of that tahsíl. This will be referred to again further on. In Delhi the differences made were, as a rule, small; but the high figure at which the owner's rate was fixed by Government seemed to call for some considerable revision in the Bángar circle so far as regards the canal villages. Sunípat assessment was altogether my work. So that, on the whole, about equal shares of the district assessment may be considered as done by my predecessor and myself. As coming last, however, I must admit my responsibility to be the greater and while doing so, it is a pleasure to testify to the conscientious care and laborious method of Mr. Wood's assessments. I proceed to give some account of each tahsíl, regarded as a revenue-paying tract, with particulars as to the mode of assessment. As the revenue rates reports of the district have not been printed, this will occupy more space than otherwise would be necessary. Appendix XX gives the facts of form A showing the area, resources, and general revenue conditions of the district. The remarks on Ballabgarh and Delhi are of course, in great part, based on, and summarised from, those of Mr. Wood; but I have not hesitated to substitute my own impressions for his wherever it seemed necessary.

Revision of Note-Book jamas necessary especially in Ballabgarh.

Delhi tahsíl.

Sunipat.

Ballabgarh tahsíl assessment.

Para 220. Distribution of Ballabgarh villages by circles.

§ 2. The area is 385 square miles with 283 villages. Extreme length 30 and breadth 20 miles. The assessment circles were six.

I.—Khádar Bángar	76	villages
II.—Bángar	80	„
III.—Dahrí Sailábá	26	„
IV.—Zerkohí	34	„
V.—Khandrát	35	„
VI.—Kohí	32	„
TOTAL ...	283	villages.

Para 221. Khádar-Bángar circle.

§ 3. The Khádar-Bángar chak lies along the river; 37 villages are purely Khádar and 39 partly Khádar partly Bángar. The villages nearest the river are subject to inundations, but where the water runs off in time, the natural fertility of the alluvial soil shows itself in fine crops of wheat and barley. Damage by 'reh,' however, is prevalent in some villages which lie in drainage lines. The Bángar position is not good soil—it is either sandy, or it is cut up by ravines and water-courses, making an outlet for the drainage from the higher lands of the main Bángar on its way to the river. Water of course is near; a hole of 12 or 13 feet will find a spring anywhere, but irrigation, probably from the very facility of using it, is for the most part dependent on kachá wells. The irrigated area is given as 6 per cent. of cultivation. The crops may be classed as 60 per cent. Rabí and 40 per cent. Kharíf—the latter being grown mostly on the Bángar soil. Besides wheat and barley and gojra (a mixture of the two), gram is grown in Rabí, and in Kharíf juár, bájrá and cotton. The most numerous class of proprietors are the Shekhs, who are perhaps the most improvident and thriftless of all the tribes in the district. Gujars, however, in some places are not much better. There are not more than half a dozen really well cultivated villages in the Khádar. Cultivation in the chak has increased by about 13 per cent. since settlement; and 19·2 per cent., as compared with the caltivated area, is still noted as culturable waste.

Chapter XI.] The Assessment.

Para 222.

The Bángar circle.

§ 4. The Bángar circle of 80 villages is almost uniformly a fine level tract, the southern portion being very similar to the Bángar chak of Palwal with which it is conterminous. The north-east and east part has a rather ridge-like strip, more sandy than the general soil, which is a fair 'rausli'. The Agra canal runs through nearly its whole length, but at too low a level to allow of anything like extensive irrigation. In some villages (see para. 240) small areas have been watered during the last few years. In the 18 miles of length of canal there are but 5 bridges; seventeen villages have land on both sides, and in some of these the detour necessary to reach their fields is very considerable, between two and three miles. This, it is obvious, is not a mere question of sentiment; as involving trouble and inconvenience, it is a real lessening and cramping of the productive labour of the agriculturist. A man who has two miles to walk to reach his fields is clearly at a disadvantage as compared with a man who can begin his work half an hour earlier, and leave it half an hour later. There can be no doubt of the practical consequence of this fact, and it has received some consideration in assessment. Artificial irrigation is 14 * per cent., water being found generally at from 20 to 25 feet. The Kharíf is as 6 is to 5 to the Rabí crop, and the staples for Rabí are barley and gram ('béjhar')—barley and wheat, and Kharíf juár, bájra, and cotton. The zamíndárs are Jats, Gujars, Gaurwás, and Brahmins. The Jat of course is a good worker, though not so good here as in some other parts of the district; the others are moderate: the Gujars, however, in this chak round about Tigáon are better agriculturists than their brothers of the hills. The expansion of cultivation here since settlement is 2·7 per cent. while the capability of extension in future is 6·8 per cent.

Canal Bridges and their bearing on the assessment.

Para 223.

Dahrí circle.

§ 5. The Dahrí-sailabá circle consists of 26 villages all more or less lying in the drainage lines of the rain-floods which, thrown down the eastern slope of the hills, get a twist southward from the general fall of the country in that direction, and, having by the violence of their downward rush scooped out a hollow at the bottom of the hills, run along it in a broad stream south and south-east thus making their way into Gurgaon district. The sandy deposit they bring down seems to have heaped itself up in a gentle but perceptible ascent to the east, so that, as matters stand now, there

* Not 11 per cent. as stated by the Commissioner in his review of the rates report.

is a well defined strip of country immediately below the hills of the nature of Dahrí. Water is only 11 or 12 feet under the surface, but wells are little used as there is little need of them. The soil as a rule is good—26 per cent. is bhúr, but bhúr, when well moistened, is surprisingly fertile compared with the ordinary soil of its kinds. The crops are chiefly Rabí because in the Kharíf the floods generally prevent sowing. Gujars, Jats, and Meos form the main body of the zamíndárs. The Meos are very thriftless. The cultivated area has increased by 7½ per cent. since settlement, but there is only 4·2 per cent. available for further expansion compared with the present cultivated area. Irrigation extends over only 3 per cent. of the cultivation.

Para 224.
Zerkohi circle.

§ 6. The Zerkohí chak, as the name implies, is the sub-colline strip of country which lies low down on the east slope of the hills. The lower villages approximate in character to the Dahrí circle, the upper, which are also the northern villages, are more like those on the top of the hills which have been formed into the Kohí circle: 13* of the latter, including all which lie above the spur of Arangpur except Molarband which is more like a Khádar-Bángar village, may be thus classed, while the other 20 are all more or less benefited by hill drainage. Below Badarpur, as noted in the first chapter, this part of the country becomes more level, with a slope toward the south, and this gives room for better soil. At the same time it is said that, since last settlement, deterioration of the soil has taken place by reason of the sand deposits brought down from the hills. I am inclined to think the amount of damage thus done has been somewhat over-estimated. The fact in some villages has been inferred, rather than observed, from the reported Dahrí area, part of which it is supposed has been left high and dry during the last 20 years. No doubt this happened here and there, but not commonly, while, on the other hand, local observation induces the conclusion that in not a few cases the difference is one of standard of estimating soil rather than a difference in the soil itself. I recur to this point further on in attempting to estimate the general character of the assessments in each chak. There were formerly several earthwork dams in this circle, but they have been for years broken and ruinous —see also Chapter IV on irrigation. The staple crops in the Zerkohí are, for Rabí, barley and gram barley wheat wheat and barley for Kharíf bájrá is by far the commonest

Deposit of sand.

* Mr. Wood notes ten; but the three small villages, Lakarpur, Pulahlad, and Tájpul, are all very poor in soil, cultivation, and resources.

crop, with some juár, and a little cotton. Irrigation is scanty being only 4 per cent.; water about 16 feet from the surface. Gujars predominate as proprietors. Cultivation has increased by 22·5 per cent. since last settlement, and there remains a margin for further expansion of 9·9 per cent. as compared with the area under cultivation.

Para 225. Khandrát circle.

§ 7. The Khandrát chak lies in the north of the tahsíl toward Delhí. Its name is derived from the Hindí word 'Khandár' (खंडर), which means a ruin, whence, by a hybrid formation, it takes the Arabic plural 'át.' The villages are very small, but lying as they do picturesquely among the ruins of old suburbs or old sites of the city of Delhi; their soil is exceedingly productive. The villages are 35; irrigation is good; water is some thirty feet below the surface, and often slightly brackish which, with a light rauslí soil, is considered very fertilising. The wells are of masonry; 30 % of the cultivated area is protected by them, and old wells are common, which, at little expense, might be put into working trim. The chak is advantageously situated as to markets and communications; Delhi is not more than 8 miles off on the average, with a good metalled road to it, while Mahraulí on the south-west is even nearer. The staples are bájra and juár for the Kharíf, and bejhar and barley, with tobacco, vegetables, and garden produce for Rabí. Tobacco is especially profitable in this chak. The zamíndárs are mostly Jats, Brahmins, and Hindú Gujars. Cultivation has increased by 16 per cent. and there is a margin of 9·5 per cent. on cultivation for further expansion.

Para 226. Kohí circle.

§ 8. The last of the assessment circles is the weakest. It consists of 32 villages lying on the top, or high up on the spurs of the hills, and is therefore called Kohí. The soil is a light 'rauslí,' not bad when it gets sufficient moisture, but generally very dry and thus it gives precarious crops. Irrigation by wells is almost unknown.* The only help in this way is from "banding" up the drainage way and so obtaining an artificial moisture, which, if well regulated, is very advantageous for cultivation. Lately several of these dams have burst, much to the damage of the villages.

Bands.

A description of their locality and characteristics is given in Chapter IV, of Part I, under the head of irrigation. I will only repeat here what I have endeavoured to point out there that no employment of district funds can be more popular, and at the same time solidly useful than the judi-

* Only 2 per cent.

cious repair of some of these fine works which in their present ruinous state seem to convey a mute but forcible reproach to our present administration. The portion of the chak lying round Chhatarpur is a high sloping plateau, with its drainage to the south-east, and a subordinate depression in the centre. The staples are bájra with juár in the Kharíf and bejhar, and barley and wheat ('gojrá') in the Rabí. Cultivation has increased by 29 per cent. and there is still nominally 15½ per cent. culturable. The real culturable area, however, is less than this, as not a little of the land so entered is such as will hardly ever repay cultivation.

Para 227.

General facts bearing on the assessment.

§ 9. The above gives some idea of the general features of the tahsíl at the time it came under re-assessment. The incidence of the revenue of the expired settlement was, as a rule, distinctively light, and the increase of cultivation afforded an obvious presumption that a considerable increase of revenue was to be expected. This presumption was strengthened by the facts of the undoubted general development of the country; the improvement of the roads and communications, especially by the construction of the Mathra road, which opens up the tahsíl through its whole length; and the rise in price of agricultural produce. This latter point is one that does not seem to require to be dwelt on at great length, though a few remarks may be made which will suffice for the other tahsíls as well as this.

Rise in prices of agricultural produce.

The return of prices given in Appendix III, and diagram accompanying it, was obtained by systematic inspection of banya's books throughout the district, and may be taken as very generally accurate. It shows a rise in price more or less decided in the case of every staple, and there is no doubt whatever that this means, in a considerable degree, a rise in value also. But I do not like to press this fact greatly as a reason self-sufficient for raising the assessment, though it certainly should cause enquiry and explanation in cases where it is not accompanied by such an increase. Under the present agricultural economy the zamíndár does not obtain anything like his share in the increased prosperity of the country, and I am one of those who fear that he is at present more under the grasp of the money-lender than he was say thirty years ago. This is not the place to discuss the problem of such social relations, but the fact is one that requires to be remembered in dealing with the practical question of assessment. The prices, taken as average for the last 20 years (1855—74) for the principal crops, are as follows :—

This point dwell on.

General prices for the whole district in assessment returns.

Wheat 27 sers 11 chitaks per Rupee.	Cotton (uncleaned) 12 sers per Rupee.
Barley 39 sers ditto.	Sugarcane (gur) 15 sers 1 chitak ditto.
Gram 34 sers 5 chitaks ditto.	Juár 36 sers ditto.

Prices of other crops can be seen in Appendix III.

These, then, were the grounds for expecting a large increase in assessment. The countervailing facts were the want of thrift common in many, perhaps most, villages; the poor character of much of the new cultivation; the loss of 'dahar' in some parts; and the deterioration of soil, whether by the deposit of sand from the hills, obstruction of drainage by the canal, or the flooding of alluvial land by the Okhlá weir.

Para 228.

Review of Mr. Wood's report by the Commissioner.

Statement showing Settlement Officer's and Commissioner's rates.

§ 10. The new assessment rates, proposed by the Settlement Officer, after consideration of these and other facts, were reviewed by the Commissioner (Colonel W. G. Davies) who before doing so made a tour throughout the tahsíl. Some alterations were made, the result of which is shown below. Colonel Davies' rates were accepted throughout by the Financial Commissioner.

Comparative statement of assessment rates recommended respectively by the Settlement Officer and the Commissioner for Ballabgarh.

CHAK.	IRRIGATED.				UNIRRIGATED.			
	By wells.		Dahri.		Dakar, Rausli.		Bhur.	
	Settlement Officer.	Commissioner.	Settlement Officer.	Commissioner.	Settlement Officer.	Commissioner.	Settlement Officer.	Commissioner.
I.—Khádar Bángar. Khádar	Bárah ... ... 5 0 0 Manured ... ... 3 6 0 Un-manured ... 2 8 0	2 12 0	.....	.....	Bárah ... ... 2 0 0 Un-manured ... 1 6 0	1 6 0	1 0 0	0 14 0
Bángar	Bárah ... ... 4 8 0 Manured ... ... 3 0 0 Un-manured ... 2 4 0	2 12 0	.....	.....	Bárah ... ... 1 12 0 Un-manured ... 1 4 0	1 6 0	0 10 0	0 12 0
II.—Bángar	Bárah ... ... 5 0 0 Manured ... ... 3 6 0 Un-manured ... 2 8 0	3 0 0	.....	.....	Bárah ... ... 2 0 0 Un-manured ... 1 9 0	1 8 0	0 14 0	0 14 0
III.—Dahrí	Bárah ... ... 5 8 0 Manured ... ... 3 10 0 Un-manured ... 2 8 0	3 0 0	2 8 0	2 8 0	Bárah ... ... 2 8 0 Un-manured ... 1 10 0	1 10 0	1 0 0	1 0 0
IV.—Zerkohí	Bárah ... ... 4 8 0 Manured ... ... 3 0 0 Un-manured ... 2 4 0	2 12 0	2 8 0	2 8 0	Bárah ... ... 1 12 0 Un-manured ... 1 6 0	1 6 0	0 14 0	0 12 0
V.—Khandrát ...	Bárah ... ... 6 0 0 Manured ... ... 4 0 0 Un-manured ... 3 0 0	3 8 0	2 4 0	2 4 0	Bárah ... ... 2 4 0 Un-manured ... 1 10 0	1 10 0	.....	.....
VI.—Kohí	Bárah ... ... 3 12 0 Manured ... ... 2 8 0 Un-manured ... 1 14 0	2 8 0	2 2 0	2 0 0	Bárah ... ... 1 8 0 Un-manured ... 1 4 0	1 2 0	0 10 0	0 10 0

Chapter XI.] The Assessment.

Para 229. Data of assessment.

§ 11. The data on which the assessment rates were founded by the Settlement Officer were mainly two, village inspection, and produce estimates. The village inspections it has been already stated, were made in the cold season of 1875, and their results entered minutely in a Note-book, the substance of the contents of which has been entered in the village statements. The enquiries made then were useful, not only as a guide to the assessment for each village, but as checking the results of the experiments made, to ascertain the average produce of the different soils and crops. These, though a great deal of trouble was taken in the matter proved unsatisfactory, the plan on which they were made was elaborate, but required more observers, than it was found possible to put to the work during the years they were in progress, 1872—74. The Settlement Officer recorded his experience, as showing that had the experiments been undertaken in about 80 villages, instead of 223, as was the case, the results might have been more trustworthy. In calculating the average produce of unirrigated soils, 3 years in 20, were taken as barren, yielding nothing at all to the cultivator.*

Para 230. Amended produce estimates.

§ 12. To supply, as far as might be, the place of the experimental statistics, a set of produce estimates was drawn up under the directions of the Commissioner. The difference in the gross cash values obtained from these two estimates is very small, but, there is a more substantial divergence in the distribution. The question of produce estimates will be discussed more at length, when the assessment rates of the other tahsíls have been referred to. For the present it is sufficient to note, that as regards circles, the Commissioner considerably raised the estimate of the Dahrí chak, and considerably lowered that of the Khádar Bángar. The other circles remained almost exactly the same. By a closer dependence, however, on the produce estimates, the Commissioner's jama at revenue rates fell about 4 per cent. lower than that of the Settlement Officer, and this amount 2,36,646 was accepted by the Financial Commissioner. The comparative figures are given below :—

* This was considered "somewhat arbitrary" by the Commissioner in his review of the rates, but the Settlement Officer had in a measure explained his grounds for the choice. Some proportion of barren years must, it is clear, be allowed and the answer to the question, what proportion, must more or less depend on the judgment of the assessing officer, which after all is the result, correct or incorrect, of a mentally recorded set of experiences and facts. And if, as is said with great plausibility, all "assessment is a series of elaborate guesses," to say that a calculation is "arbitrary" seems a criticism hardly complete in itself.

CHAK.	Old jama (Average of the last 5 years.)	Produce jama (form D) prepared by Settlement Officer.	Produce jama (form D) prepared under Commissioner's orders.	Jama at Settlement Officer's rates.	Jama at Commissioner's rates.
* 1871-72—1875-76 Khádar Bángar	46,233	59,063	54,222	52,304	53,653
Bángar	79,126	96,579	96,021	1,00,300	94,572
Dahrí Saílábá ...	32,592	29,395	31,919	34,213	33,399
Zerkohí	21,349	20,921	20,363	22,889	21,742
Khandrát	9,889	13,406	13,443	13,958	13,793
Kohí	13,123	20,523	20,941	21,362	19,487
TOTAL ...	2,02,312	2,39,887	2,36,909	2,45,026	2,36,646*

Comparative Statement of jamas.

§ 13. One substantial difference in the Commissioner's rates from those of the Settlement Officer, is that he adopted a uniform rate for well irrigated lands, instead of having a separate rate for—.

(1) Well land near the village.

(2) Well land outlying manured.

(3) Well land outlying unmanured.

Para 231.

Differences as to principles of assessment, between, Settlement Officer, and the Commissioner.

(1).—Irrigated rates.

Mr. Wood's reason for this minute classification was, that it is impossible to estimate a fair average yield, of all the irrigated land of a village, unless the three descriptions, above noted, are equal in area, for it is clear, that the rate of productiveness will vary directly with the proportion of 'báráh' and manured land. The Commissioner, however, considered that the fact of such difference of proportion existing in different villages, might be sufficiently taken account of, in making out the detailed assessments. He also noted, that a strong objection to such a classification was, its "tendency to reduce the work of assessment to a mere arithmetical computation; while another was found in the as-

* These figures slightly differ, from those given in Form A. which has the amended and revised areas.

"sumption that the distinction was of a permanent nature, "whereas that drawn between manured and unmanured land, "was of a highly artificial one, even if it might certainly be "supposed, that the division had been correctly made." Colonel Davies therefore in estimating Mr. Wood's chahí rate took an average * of the three given as above described.

Para 232. Kacha wells.

§ 14. Another important question, connected with the assessment of irrigated land, was that of the rate to be put on kacha wells, *i. e.*, wells not lined with masonry. Mr. Wood acting under the authority, as he thought, of a Government letter of 1874, had exempted all lands lying under such wells from irrigated rates. Colonel Davies on the other hand remarked, that "it was altogether misleading to class such "lands as unirrigated. They should be shown in the returns; "as what they actually are, irrigated; while in assessing the "villages containing them, the irrigating power, *i. e.*, the "power to irrigate a certain area by means of this descrip-"tion of well, should be taken into consideration, and a "special rate imposed on such area." This view was supported by the Financial Commissioner, and approved by the Local Government.

Para 233. (3).—special dry rate on 'Bárah' unirrigated.

§ 15. The Commissioner also dissented from the Settlement Officer's proposal, to have a special rate for the unirrigated 'bárah' (or land near the village) while he agreed with him in estimating dry dákar, and rausli as practically of equal productiveness; and irrigated soil in the same way on a par, whether dákar, rausli, or bhúr. The Settlement Officer's reason for not having a special rate for irrigated bhúr, was the very small percentage of soil, found of this quality.

Para 234. Procedure before announcement of village jamas.

§ 16. The revenue rates report for the tahsíl was, as already noted in Chap. X, submitted by Mr. Wood on the 16th August 1876. Government orders were received in January 1878. I was at the time just going to inspect Sunipat, a work that could not be deferred; but having done all I could in that quarter, I came back in April to try and get as much local information, about the resources of the various villages as possible, before announcing the detailed assessments. I visited a large number of villages, in cases where personal inspection seemed likely to clear up doubtful points, or where the Extra Assistant Settlement Officer, differed materially in his estimate of the jama, from that noted by Mr. Wood, and having thus taken all the precau-

* It is obvious that this could fairly represent Mr. Wood's rates, only when the area of each kind is equal; not frequently the case.

tions against mistake, which seemed possible, under the circumstances. I made the announcements toward the end of May; for the southern part of the tahsíl at Ballabgarh, for the north at Mahraulí. The sanctioned revenue rates amounted to Rs. 2,36,646/-. Mr. Wood's detailed assessments reached Rs. 2,40,360/-, but there is reason to suppose that had he himself remained to announce, he would have lowered this figure, and under the Government orders it was directly incumbent on me to do so. These inculcated great caution, in dealing with cases, where the rates yielded an undue increase. The total of my announcements was accordingly Rs. 2,32,130/- that is, Rs. 4,516/- below rates. All the 283 villages accepted at once except five, and in these cases I found it necessary for the most part to make concessions. They were all in the Kohí circle, and it is very likely that my first figures were in some cases too high, though I had, in each, reduced Mr. Wood's estimate. The following statement shows the result of the Assessment Chakwár in this tahsíl :—

Announcements how made.

How received.

Result chakwár for the tahsíl.

1	2	3	4	5	6
CHAK.	Old Jama, *i. e.*, average demand.	Revenue rates, revised calculations.	Jama as finally determined after review and appeal.	*Difference between columns 3 and 4.* Increase.	Decrease.
Khádar Bángar... ...	46,233	53,698	50,355	...	3,343
Bángar	79,126	94,598	93,005	...	1,593
Dahrí Sailábá	32,592	33,414	33,925	511	...
Zerkohí	21,349	21,743	21,840	97	...
Khandrat	9,889	13,794	12,540	...	1,254
Kohí	13,123	19,367	16,325	...	3,042
TOTAL OF TAHSIL ...	2,02,312	2,36,614	2,27,990	...	8,624

§ 17. In column 4, it will be noticed, are included the results of review and appeal. There were 41 of the latter, and of these 33 were accepted and 8 rejected, the total result

Para 235.

Appeals.

being a reduction on my announcements of Rs. 2,770/- in appeal, and Rs. 1,370/- in review. As the facts will be valuable, in dealing with questions of remissions or reductions hereafter, should any such arise. I have thought it worth while to note the cases of accepted appeals in detail, see Appendix XXI.

Consequence in some cases of reductions thereby given.

In a few cases the concessions made by the Commissioner, seemed to alter the character of the assessment, so materially, that I thought myself bound to make reductions in the jamas of adjoining or neighbouring villages, in order to preserve an equality and consistency of rates in the same tract. Assessment of gardens gave an addition of Rs. 508/-, resumed maáfís including 'nisf-ríts' Rs. 1,507/-, while a deduction of Rs. 116/- was necessary for land taken up for public purposes, and a 'nisf-rit' plot assessed at *full* rates along with Khalisa land. The final amount therefore, for which in Form E, sanction has been obtained, is Rs. 2,29,889/-, which is also the Kamil or ultimate jama of Form G, see Appendix XXII. The initial jama, it will be observed, there is Rs. 2,27,832/-, allowing Rs. 1,269/- on progressive jamas, and Rs. 788/- on protective leases.

Para 236.

Remarks on the differences from revenue rates chakwár.

§ 18. In the Dahrí and Zerkohí it will be noticed, I assessed somewhat over revenue rates. This was done deliberately. After local enquiry, which information obtained from time to time seemed to confirm, I came to the conclusion, that the capacity, and resources of a good many villages in this part of Ballabgarh, had been under-estimated. The mistake, I think, lay in under-estimating the powers of bhúr soil favourably situated with regard to moisture. Low lying bhúr is in fact better than dry rauslí; and if the moisture is pretty certain, and not liable to great variation in degree and season, the sandy soil, need be treated with no more indulgence than ordinary rauslí. The jamas announced were in many cases reductions, and I could see that in some of these a decrease in the revenue demand, had not been expected. I do not mean to say this is a crucial test, but as a rule it is a good one. On the whole I am still inclined to think that this circle has been liberally, if not generously, treated. The Bángar assessments are very close on the revenue rates. In the printed orders on the assessment report, there is a clerical mistake. It is there said, that "care should be taken in assessing the Khádar, Bángar, and Rohí Circles." I have ascertained, however, that what was meant was "care should be taken in assessing the Khádar, Bángar and (of course) Kohí circles," and as a matter of fact there

Directions of Government as to assessment in particular circles.

was no need to go materially below the revenue rates, in this chák, in distributing the assessments. In the Khandrát I was not able to reach the circle rates. The villages are small, and though the soil is good, the resources of the cultivators are not as a rule large. As it is, the new jamas gave an increase of over 20 per cent. quite as great in my opinion, as is safe. The Kohí circle, required more delicate and careful handling than any other. There had been to start with, a previous assessment, which in a good many villages, fell with an almost nominal incidence on the area under cultivation. This and other things pointed to a large increase in the assessment, but on the other hand the cultivators were nearly all improvident, lazy, and thriftless Gújars; many of them were poor, and none of them, in more than average circumstances. Mr. Wood's note book jamas on the 32 villages of the circle, amounted to Rs. 20,510/-, *i.e.*, Rs. 1,143/- above the circle rates amount Rs. 19,367/-. I reduced these in detail to Rs. 16,925/- making reductions in 23 cases. In appeal, further reduction was made to Rs. 16,325/-, so that if the revenue rates standard, is to be anything more than a name, quite enough concession has been made in this circle. Of this amount too, Rs. 894/- has been deferred under progressive jamas, for five years; as explained in the following paragraph.

The Kohí circle assessments.

Para 237.

§ 19. In the case of 10 villages in this tahsíl, the Financial Commissioner's sanction, was obtained for the adoption of progressive assessments, but as the approval of the measure was qualified, and given to a great extent, on reliance on my representations, and those of the Commissioner, who supported them, it seems worth while recording the substance of the remarks made in referring the matter, and of the Financial Commissioner's orders on that reference. In my No. 156 of 29th May 1878, I noted that indulgence had been shown, to the weaker villages, in the announcements of detailed jamas just made, but that the proper degree of gentleness could be manifested only, by allowing progressive jamas in 12 specified cases, where the increase was very sudden, and yet on a consideration of all the circumstances, not to be reasonably diminished. "The mere fact indeed of a large increase "in assessment, is not of itself a conclusive reason, for making "the jama progressive, though it is in my opinion, cogently "presumptive of such a necessity. Granted a fine set of "Jats, with good ploughs, good oxen, and good houses, "and a jama that has hitherto been distinctively light, it

Progressive assessments for 10 villages.

My reasons for proposing them.

* A similar proposal, though it has been in a few cases now adopted there, was negatived generally in Gurgaon.

Progressive assessments.—(Continued.)

Reasons given for proposing them.—(Continued.)

"may be possible to double their jama, without any serious or "permanent injury, to the prosperity of the community. "But with all deference to Government instructions, I would "submit, that this is the only kind of preparation they are "able to make, for a sudden increase in the Government de- "mand. I may be wrong, but it seems to me as about the "last thing done by any native agriculturists I have met "with, to *consciously* prepare for a rise in jama by laying up "money, grain, or any other kind of immediately available "wealth. What really happens is, that by reason of the "ordinary working of economic laws, a light jama induces "them to spend a little more on their houses, a little more "on their oxen, perhaps a little more on their seed. They "are thus, in a measure prepared, for a less fortunate time, "but it is a time, which it seems to me should come on them "gradually, as it enables them better to face any chance "accident of loss by adverse seasons, cattle disease, personal "illness or the like. This is taking the case of our best and "pluckiest agriculturists, men who with strong arms, and "industrious habits formed by generations of useful labour, "know the full power of the earth under willing hands. But "change the men, or their circumstances, or their traditions "(an important element for consideration) and the case is "materially altered. In the present instance we have mainly "two tribes, Gújars and Sheikhs. The latter have already "been characterised by * yourself as most unthrifty and im- "provident living in wretched hovels for the most part, and "not ambitious of anything more than getting the minimum "subsistence produce from the land. Double the revenue of "these men at once, and the great probability is they will "be ruined. The Gujars of the Kohí villages are in no better "condition. Their villages are almost entirely kacha huts "with reed-roofs leaky and old; the men themselves origi- "nally thieves, showed badly at the time of the mutiny, "and are not conspicuously loyal at present. A great rise "in jama would, probably make many of them, cast longing "rememberances on the time, when the nightly occupation "was a search after cattle, not their own." * * * *

"On the other hand I can not recommend any further release, "to do so, would be to surrender Government rights unjusti- "fiably, and (what is perhaps even more important) make it "difficult for the assessing officer hereafter, to fix a right "jama. But by a progressive jama the people would be "given a chance. They would feel the harness gradually

* Colonel Davies as Commissioner in his review of the Ballabgarh assessment report.

"tightening, and under a judicious administration, would "brace up their energies, to meet the necessity for increased "industry and forethought."

Orders of the Financial Commissioner.

After a reference made by the Commissioner to ascertain the character of the crops of the years of measurement, the orders of the Financial Commissioner were obtained. Mr. Lyall remarked; "the system is most legitimate in the case "of estates owned by proprietors who are, in respect to in- "come and scale of expenditure, much above the ordinary "run. If such estates are found to be very lightly assessed, "both with reference to present profits and capabilities of "improvement, then in making a settlement for a long term, "I think progressive jamas often decidedly expedient. "These men can, and often do prepare, for the coming in- "crease, by reducing expenditure or by extending cultivation; "and in such cases I would sometimes postpone part of the "increase for as long as seven or even ten years."

Remarks explaining them.

"I understand that the 12 villages under report are all, "or mostly, villages of the class discussed in the last para- "graph. If they are at present in poorer circumstances than "usual, from calamities of season, or expenses of Settlement, "then, that would be a good reason for postponing full "enhancement for a short term of say 3 to 5 years; or if "there is much tenant land in some of them, and tenants "pay not the revenue and cesses, but independent rents in "cash or kind, and such rents are low compared to revenue "rates, and certainly capable of enhancement that might be "a good reason for a short postponement. Otherwise my "view would be, that, as the percentage of increase is very "great in all these cases, a further reduction should be given "* * * * * and the full jama announced "at once."

"I put little weight on Mr. Maconachies' argument, that "such reductions make it difficult for future Settlement "Officers to fix a right jama."

"If the full jamas to be taken are announced at once "in some of these cases, because according to my view, stated

"above, postponement is not advisable in their case, it would, "I think, be right to particularly direct the Deputy Com- "missioner's attention to such villages, in order that suspen- "sions and remissions in case of bad harvests might be allow- "ed in them, with special freedom during the first few years "of the new Settlement."*

Calculation of progression how made.

It was also directed that the full jama should be announced, and explanation of the present postponement of revenue given, as a deduction of so many annas in the rupee on the full amount. By this means the remembrance of the concession, it might be thought, would be more real and present. Meanwhile the Commissioner had in appeal reduced some of my jamas, and had himself made the assessment progressive in two† cases, while in a third‡ the principle had been affirmed by the Financial Commissioner in appeal, so that on reconsideration, and after reflection on the Financial Commissioner's remarks, progressive assessment seemed necessary in the case of seven other villages only. For these villages, ten altogether, the principle was adopted: the following figures show the results:—

Assessments likely to drive out the proprietors must sometimes be made.

* Para. 6 of this letter went on:—

"There may be some villages in which it can be foreseen that even a "much smaller enhancement than the facts justify is very likely to end in ruin- "ing the present proprietors, because in spite of very light assessments they "are from want of thrift, energy and intelligence, already very poor and deeply "in debt. In some of these cases, I think, we must deliberately impose an "assessment which though most decidedly light, we can foresee is likely to "drive out the proprietors in the end—such men are only fit for the position "of tenants, living from hand to mouth, with no credit to pledge, and im- "pelled to work by the necessity of living and by compulsion from above. "This was very much their position under native Governments and they will "sink to it again. If we allow them a decidedly light assessment, as compared "to other villages I think we do all we can for proprietors who are helplessly "bad málguzárs by nature."

This paragraph indeed is not essential to the decision of the matter, but it seems (if I may say it) so wise and right that I can not forego the pleasure of recording it here. The paternal policy of "coddling the zamindar" sometimes confounds the duty of helping those who help themselves, with an unnecessary and demoralising indulgence toward lazy castes, which make their social or religious pretensions, an excuse for getting a light revenue from Government, and then levying black mail on their more industrious neighbours to pay it.

† Fatehpur Beri Deva Mandi.

‡ Garhi Dhámina.

NAME OF VILLAGE.	Chak.	Old jama.	Full jama.	Deduction proposed for five years.
Garhí Begampur	Khádar Bángar	202	400	4 annas.
Muazzamábád ...	„ ...	207	400	4 „
Sheikhpur	„ ...	135	300	4 „
Ahmadpur	Bángar ...	205	400	4 „
Assaulá	Kohí	247	450	3 „
Masúdpur	„	151	300	4 „
Yahyanagar ...	„	460	680	2 „
Fatehpur Berí ...	„	541	1,000	3 „ $2\frac{2}{5}$ pies.
Deva Mandí ...	„	658	1,000	4 „
Garhí Dhámina ...	„	247	600	5 „ 4 pies.

Villages under progressive jamas.

Two other villages were originally thought of for progressive jamas; Tekhand reduced from Rs. 250/- to Rs. 200/- on appeal—and Tilorí Bángar which had in the interim been purchased by Kasim Alí of Faridábád in whose hands it was worth the full jama assessed Rs. 200/-.

Para 238. Summary of results of assessment and forecast.

§ 20. Viewed as a whole, the new assessment of the tahsíl has raised the Government revenue by Rs. 27,577/- or by 13·6 per cent. The presumptions mentioned in para. 227 verified and strengthened by the results of minute village to village inspection, appear to warrant the increase taken. And there seems no reason to anticipate any thing but a fair measure of prosperity for the tahsíl in the future. The chief danger of course in a tract where such a considerable portion of the cultivation depends on rain, must always be drought, and this would be felt severely in several parts. The Kohí villages, lying high and dry, and the less protected villages in the Bángar would be the first injured—and if the want of rain continued, the weaker villages throughout the tahsíl would feel it. But unless this calamity occurs to a marked degree, there should be no difficulty in collecting the revenue.

Chapter XI.] The Assessment.

Para 239.

Special features of the tahsíl requiring attention of the revenue authorities.

(1).—Shor in Khádar villages.

§ 21. Special features worth notice are first:—the appearance of 'reh' in certain villages in Khádar Bángar which lie under the lie of the canal. These are Tilpat, Ismáilpur, Mithepur, Aghwánpur, Sihatpur. Mr. Wood in his notes had remarked on this, and to a certain extent, allowed for it. Subsequently I directed a girdáwarí to be made to ascertain whether the damage was increasing—with the following results:—

Village.	Damage at measurements—1873—75.		Additional damage since measurements.		Jama at circle rates.	Jama first assessed.	Allowance made.	Final assessment.
	Bigha	Biswa	Bigha	Biswa				
Tilpat	39	10	53	16	2,898	2,760	...	2,500*
Aghwánpur ...	1	0	136	3	1,014	780	40†	740
Ismáilpur	174	7	33	2	235	200	10	190
Mithepur	28	5	5	13	539	500	... †	500
Sihatpur	10	0	162	17	368	280	30	210‡

I should not expect to find any necessity again for remission, as the evil has probably come to a head now, and extension of the affected area in any material degree is not likely.

(2).—Damage done by the Okhla band.

Secondly:—the damage done by the Okhla band. This is not extensive, it lies among a few villages lying on the river side above Okhla, and arises from the artificial increase of height, given to the surface level of the Jamna by the masonry weir, built across it. In the rains, of course, this causes flooding back up stream as high as the top of the weir, and the Khádar lands consequently suffer from excessive moisture. The injury indeed is said to extend right

† It must be remembered that I had already in 1878, made partial allowance for the damage. It was because I thought that the extent might not have been accurately gauged that I ordered the enquiry.

* This was the jama fixed in appeal by the Commissioner, and I considered the indulgence to be sufficient for all purposes.

‡ I reduced to Rs. 250/- and the Commissioner in appeal to Rs. 210/-.

away up in the Delhi tahsíl as far as the southern boundary of Sunipat, but this must be an exaggeration, and even where the influence is felt, its degree appears over-stated. The fact of flooding in itself does not necessarily mean damage, which results only when the submersion is unduly prolonged. I do not anticipate the necessity of attaching any great importance to this matter, but in dealing with the alluvion. diluvion assessments it will be well to remember it.*

(3).—Deterioration of hill soil by reason of formation of ravines.

Thirdly :—in certain hill villages, or perhaps in all where there are "bands," whether in good condition, or broken, attention should be paid to the effect wrought on the configuration of the soil surface by the rains. It has been found in experience, that by what might seem an unimportant change in the direction of a drainage flow, startling results occasionally follow. What were previously fairly level lands or easily managed slopes, become rugged and irregularly broken up ground, interspersed with ravines which set the agriculturist at defiance.

* Mr. Wood, would seem to have thought the injury more serious than I do, but he places the chief seat of it in the Delhi tahsíl. He says that, "about half the Dahrí area in the Khádar Bangar circle has been much injur- "ed by the long protracted submersion every year during the rains, owing to "the Okhla weir. The Government had given compensation for land taken "up for the Agra canal, but none to owners of villages whose lands have "deteriorated in consequence of the weir."

Estimate of extent of the range of influence of the band.

In assessing such villages, however, the facts of the case have been taken into consideration. I made an attempt to get data for the mathematical determination of the extent of range of this damage ; but was satirised by the Executive Engineer for my audacity. From the facts, however, which he kindly gave me, it would seem impossible for the weir materially to affect villages lying in the upper part of the Delhi tahsíl.

(1).—The reduced level of the highest recorded flood at Jamna bridge (1878) is 673·70 feet above the sea.

(2).—The reduced level of the highest recorded flood at Okhla above weir—665·30 or 8·4 feet lower.

(3).—The reduced level of the highest recorded flood at Okhla below weir—659·30 or 6 feet lower still.

(4).—The normal depth of the river during the winter is 4 feet.

(5).—Height of the highest flood above the normal cold weather level—12 feet.

(6).—The slope of the stream (cold weather) previous to the construction of the weir may be taken at 10 inches to the mile.

If the slope of the river-bed were the same after the construction of the weir as before it, the obstacle raised by the 'band' which is said to be 7 feet above the natural bed at the spot, would, so far as I can see, affect only those places which are not more than $7 \times \frac{12}{10} = 8{\cdot}4$ miles up stream. And though the slope of the river bed in this part may have been somewhat lessened permanently by the weir, it can not be much.

If this calamity occurs on a scale at all extensive, it causes serious loss to the village resources, as the cultivated area is by so much diminished. But the contingency though quite possible is not probable except where a 'band' bursts, or has burst. There, if steps are not taken to mitigate the fierceness of the downward rush of the drainage, the land will undoubtedly suffer. If for instance the Gwálpahárí band is not repaired, serious damage will ensue to the lands of Garhi Dhámina, Fatehpur Beri and Deva Mándi.

(4).—Deposit of sand silt.

Fourth :—Another point worth notice is that in the dahrí and zerkohi circles, the villages which receive the floods from the hills, may in those floods receive a deposit of barren sand covering up, with very ill consequences, the comparatively fertile soil which is the result of continued and systematic cropping if moderate. And in some cases no doubt damage has been done. But it must be remembered that the present assessment has taken account of and made allowance for such injury up to date, and I have already noted my opinion, that the consideration given to the question of deposit of sand, has been liberal, not to say, too bountiful in its practical consequences.

(5).—Prolonged submersion in the Dahrí circle

Lastly :—in the dahrí circle there are two or three villages where prolonged submersion of some of the best Rabí lands occurs in rainy years. In dealing with such cases, it is well to remember that though such submersion is for the current year an evil, it often gives a bumper crop in the year succeeding, and that a village in ordinarily good circumstances, has no right under the local system of assessment, to ask for remission of revenue on account of excessive flooding on the dahrí lands. Suspension may indeed be at times advisable, but remission can hardly ever be necessary.

The Lal Kitábs should always be consulted.

The above give some hints as to special features of the anticipated working of the tahsíl assessment, which can conveniently be noticed here, but it should not be forgotten that the best, the primary, and the most complete information respecting any and every village is to be found in the English Note-books, which have been carefully prepared, and which, if freely consulted, would give the collector a practical grasp over the details of any assessment question, which it is hopeless to expect he can get otherwise, unless the circumstances of his administration are such as we are not likely to see again. I do not mean to suggest the advisability of doing without local knowledge gained from inspection, but this is certain that if the officer studies his village note-book before going to the spot of any investigation, he will have a much greater

grasp of the case than he would going without any such previous study.

Para 240. Irrigation from Agra canal.

§ 22. Judging from the experience of the working of Mr. Channing's assessment in Palwal tahsíl, it is not unlikely, that there may be a moderate development of irrigation from the Agra canal, in those villages where the land does not lie greatly above the water level. In a few villages as already stated in this chapter (para. 222,) irrigation has commenced, though the area is in each case trifling.* If canal irrigation be extended to lands already watered by wells, the principle prescribed for adoption in Gurgaón, will, no doubt be also followed here, *viz.*, no owner's rate will be levied, but book credit equal in amount to what on 'bárání' land would be taken, as owner's rate will be deducted from the land revenue assessment of such cháhí land, and allowed to the irrigation department. If the canal irrigation is taken by "lift" and not by "flow," its introduction can not be other than beneficial; there is not much likelihood of swamping in the higher lands.

Delhi tahsil assessment.

Para 241. Distribution of villages in chaks.

§ 23. Some changes were made in the number of villages in Delhi tahsíl during settlement, which are detailed in para. 189 of Chapter X. The number of villages now is 288, divided into the following assessment circles :—

I.—Khádar Bángar	43	villages.
II.—Bángar	98	„
III.—Dahrí Sailabá	78	„
IV.—Zerkohí	30	„
V.—Khandrát	17	„
VI.—Kohí	22	„
TOTAL ...	288	villages.

The area of the tahsíl is 425 square miles, and the greatest length and breadth are nearly equal at 25 miles the average length 22 and breadth 19. The assessment

* The following figures are given as to the area irrigated in 1877-78 :— Pahladpur Mazra Digh 48 bighas Sunpahar 19 bighas 4 biswas, Shahpur Kalan 99 bighas 4 biswas Digh 108 bighas 16 biswas Madanpur 8 bighas Jassaula 3 bighas 4 biswas Baselwa 4 bighas 16 biswas Okhla 1 bigha 12 biswas Barauli 3 bighas 4 biswas Sotai 6 bighas 8 biswas ; also for kharif 1878 the total area is given 83 acres, and for Rabi 1878-79, 589 acres.

chaks it will be noticed were the same in number as in Ballabgarh. In description also they are generally similar, but there are material differences which I proceed to specify.

Para 242. The Khádar Bángar circle.

§ 24. The Khádar Bángar has 43 villages, of which 32 are purely Khádar and 11 partly Khádar and partly Bángar. The Bángar soil of these latter villages is not so sharply divided off from the Khádar as in Ballabgarh, nor is it cut up so much by ravines: the quality of the Khádar soil is about the same as in Ballabgarh, but north of Delhi there is a good deal of land which lies in the way of the drainage coming down from the north-west, where it is also subject to an awkward back-water flow of the river, which asserts itself whenever a flood comes, and makes the low-lying lands for several months swampy, and for the rest of the year very weak. Some injury too has been sustained by the southern villages in this chak, owing to the construction of the Okhla weir for the Agra canals, (as already noted in para. 239, of this Chapter.) Water is about 10 feet from the surface. The proprietors are a mixed lot, Chauhans, Jats and Muhammadans. Statistics show that cultivation has increased by 2·6 per cent. since settlement, the culturable is 111·8 per cent. on the cultivated area, and well irrigation 28 per cent. The Nahrí area for the year of measurement is only 20 acres or 2 per cent.

Para 243. Bángar circle.

§ 25. The Bángar circle is the largest, containing more than a third of the villages in number, and contributing considerably more than half the jama of the tahsíl. It occupies the north central part of the tahsíl; 82 villages here are irrigated from the Western Jamna Canal, which enters the circle at its north-western corner and goes south-east towards Delhi where it rejoins the Jamna: about 13 miles before reaching Delhi the superfluous water is drawn off by the Gangatolí escape, which strikes away east crossing the Grand Trunk Road below Alipur, and so on to the river. The soil is mostly a light rausli, except where from canal irrigation it has received a layer of silt and decayed vegetable matter, which has given it a more clayey consistency. The water in wells lies near the surface also here, but the mainstay of irrigation is the canal: great damage has been experienced in not a few of the finest villages from a recklessly copious use of canal water, aggravated by a bad system of drainage (see Chapter above quoted) which of itself is an enormous evil. I shall have to refer to this point again in dealing with the Sunipat assessments. Some of the villages on the east side of the chak, such as Bhalswa, Jehángírpur, Hamíd-

pur, Bankaulí and Bakhtáwarpur are more like Khádar than Bángar as has been already noted (para. 7 Chapter I) and this fact has been remembered in assessment. The proprietors in this chak are almost entirely Jats, good cultivators by nature, but seriously debilitated in body, and not a little demoralised in mind by the misuse of the canal. The Rabi crops here are wheat, gram and barley, and mixtures of these: those of the Kharif juár, bájrá, sugarcane, rice and cotton. The area under cane is on the average nearly ¼th of the whole season's crop; rice is grown only in the more swampy villages. The realignment of the Western Jamna canal will no doubt have a beneficial effect on the condition of these, but improved drainage is also imperatively required. Cultivation here since settlement has increased by ·4 per cent. the culturable now remaining is nominally 20,049 acres being 26·8 per cent. of the cultivated area, but it is in reality much less, as a very large proportion of what is entered as culturable is really quite unfit. The Nahrí area for the year of measurement is 46,138 acres or 61·7 per cent. of the whole area under cultivation. Besides this there are 6,307 acres under wells or 8 per cent. more.

Para 244. Dahrí or Dábar circle.

§ 26. The Dahrí or Dábar circle as it is here called in accordance with its local name is a tract of 78 villages lying round the low ground of the Najafgarh Jhíl in the south-west of the tahsíl. The areas of many villages here are more or less submerged by the floods which come down from the west and north-west (see remarks on drainage Chapter I.) The land naturally is a very light rauslí, but in parts the many years' accumulation of vegetable matter in the low-lying lands has greatly improved it. The sand, however, brought down by the Sahibi naddi from the hills of Alwar is sometimes very considerable, doing serious damage to the soil. Water is on the average 13 feet below the surface and in not a few villages brackish: the crops are for the Kharíf bájrá, juár, sugarcane, cotton, and in the immediate neighbourhood of the Jhíl, rice. The largest Rabí crop is gram, then come wheat and barley and mixtures of these. The zamíndárs are mostly Jats, and Ahírs: nearly all good and industrious cultivators. Since settlement cultivation has increased by 7·8 per cent., the remaining culturable is 14,371 acres or 27 per cent. and irrigation is 10 per cent. The Nahrí area for the year of measurement is 82 acres or ·2 per cent.

Para 245. Zerkohí circle.

§ 27. The Zerkohí circle in Delhi has 30 villages lying on the west side of the Delhi hills: the character of the soil, and the circumstances of the chak are much the

same as in the Zerkohí circle of Ballabgarh, perhaps the quality of the 'rausli' is a little lighter, but then the damage done by the hill streams is much less. The wells are slightly deeper here than on the eastern side of the hills, being 19 feet: 16 in Ballabgarh. About $\frac{1}{10}$th of the cultivated area is watered by wells, and another $\frac{1}{10}$th by "bands" and other so called natural irrigation. The kharif crops are bájrá and juár: the Rabi gives gram, wheat, barley and mixtures of these. The zamíndárs are mostly Jats and Ahírs. The increase in cultivation since last settlement is 13 per cent. and there is still 18·6 per cent open for extension of cultivation.

Para 246. Kohi Circle.

§ 28. The kohí circle consists of 22 villages similar or perhaps slightly inferior in character to those of the hills in Ballabgarh: some are on the top and some on the hill slopes; the ground is a good deal cut up by ravines, deep fissures, and watercourses. The soil almost entirely 'rausli,' is poor and sandy. Water of course lies deep: the average depth to the spring is 36 feet 6 per cent. of the cultivated area is watered by wells. The Kharif crops as usual are bájrá and juár in the proportíon 2 to 1. The Rabi gives gram and barley and a mixture of these: wheat is very rarely grown as the soil is too poor for it. The zamíndárs are mostly Jats and Ahírs. Since settlement cultivation has increased by 14·4 per cent. and the culturable is entered as 3,247 acres or 14·2 per cent.

Para 247. Khandrát circle.

§ 29. The Khandrát chak is made up of 17 villages of the same character as in the Khandrát of Ballabgarh: but they lie near the city, and enjoy greater facilities of irrigation as the water is not so deep, and wells are more numerous: 41 per cent. of the cultivated area is irrigated. There is a comparatively large area of culturable waste valuable for its grass: and the communications are exceptionally good as there is a triangle of pakka roads lying among the villages of the chak. In the Kharif crops juár takes the lead as against bájrá elsewhere. In the Rabí, there are the usual cereals, but there are also miscellaneous crops such as tobacco, pepper, and other first class crops, which with such on enormous market close at hand are very profitable. Cultivation has increased since settlement by 14·8 per cent., the remaining culturable is 2,540 acres or 51 per cent. on the cultivated area.

Para 248.

Circle rates of the Settlement Officer and the Commissioner.

§ 30. The rates proposed by the Settlement Officer and by the Commissioner respectively for the several circles were as follows :—

	IRRIGATED.				UNIRRIGATED.			
	By well.		Dahri.		Dakar, Rausli		Bhur.	
	Settlement Officers.	Commissioners.	Settlement Officers.	Commissioners.	Settlement Officers.	Commissioners.	Settlement Officers.	Commissioners.
Khádar ... ... / Bángar	3 4 0	3 4 0	1 10 0	1 14 0	1 8 0	1 8 0	0 14 0	0 14 0
Bángar...	3 0 0	3 0 0	2 0 0	2 0 0	1 8 0	1 8 0	0 12 0	0 12 0
Dahrí	3 4 0	3 0 0	2 8 0	2 8 0	1 6 0	1 6 0	0 14 0	0 12 0
Zerkohí	2 12 0	2 12 0	2 2 0	2 2 0	1 2 0	1 2 0	0 12 0	0 12 0
Kohí	2 4 0	2 4 0	2 0 0	2 0 0	1 0 0	0 15 0	0 10 0	0 10 0
Khandrat	3 8 0	4 0 0	1 12 0	2 0 0	1 10 0	1 12 0	1 0 0	1 0 0

Circle rates of the Settlement Officer and the Commissioner.

Para 249.

Differences in the various circles - Dahrí of Khádar Bángar.

§ 31. In the Khádar Bángar chak Colonel Davies advocated a rise in the dahrí from ~~Rs.~~ 1/10/- to ~~Rs.~~ 1/14/-. This, speaking from the point of working experience gained subsequently in announcing the detailed jamas, was, I think, fair : but I found it difficult to work up to the well-irrigated rate of ~~Rs.~~ 3/4. This is not too much for good villages, but for all others decidedly hard.

The Bángar circle rates show no difference. In the dahrí the chahí was reduced from ~~Rs.~~ 3/4/- to ~~Rs.~~ 3/- and the bhur from ~~Rs.~~ 0/14/- to ~~Rs.~~ 0/12/-. The former change I think an advantage, but I doubt whether the bhur ~~Rs.~~ 0/14/- rate was more than fair. If the chahí rate includes the Nahrí rate considered as a wet assessment then the owner's rate being very nearly* ~~Rs.~~ 1/8/- the dry assessment of canal land becomes also nearly ~~Rs.~~ 1/8/-. I shall recur to this in speaking of Sunipat.

Dahrí chahi and bhur.

* It should be noted that at the time Mr. Wood submitted his proposals for revenue rates he estimated the owners' rate at ~~Rs.~~ 1/- per acre.

Kohi rausli.

In the Zerkohí there was no difference and in the kohi the only alteration made was to lower the dry 'rausli' rate from Rs. 1/- to Rs. 0/15/- a prudent change but in sanctioning the dahrí rate the Financial Commissioner remarked that if the Rs. 0/6/4 $\frac{4}{5}$ pies per acre which was authorised by Punjab Government Notification No. 4,068 I of 29th September 1873 continued to be taken by the district officers it might make the rate high. Further report was accordingly requested on this point. I may now mention in connection with this that water rate as mentioned above is taken in only one village Yahyánagar, where the levy is quite fair.

Dahri rate on 'bands.'

Present state of facts.

In the Khandrat Colonel Davies as Commissioner raised the rates for chahí from Rs. 3/8/- to Rs. 4/- that for dahrí from Rs. 1/12/- to Rs. 2/- and the 'rauslí' from Rs. 1/10/- to Rs. 1/12/- but on further consideration and after consulting me, he decided as Additional Financial Commissioner, to accept the rates as they originally stood, and I think that, treating them as average rates this was right, though the exceptional assessments of a few villages raised the total of the detailed jamas good deal above that of the sanctioned rates.

Para 250.

Results of application of rates.

§ 32. The results of the application of the different rates are given below, together with the produce estimate, and the actual jama obtained by working out the detailed assessments. The same objections it should be observed, apply here as in the Ballabgarh tahsíl, to the Settlement Officer's produce estimate. The area of experiment in each case was limited to one biswa *i. e.* the 32nd part of an acre. The number of experiments made was 1,296 in 187 villages. It is obvious, that in dealing with such small areas in each case, great care would be necessary to see that the quality of the crop was average. Mr. Wood has recorded his opinion, that the results were not trustworthy, and I agree with him. An amended estimate was prepared by order of the Commissioner and with the notes made after inspection of each village is the main basis of assessments.

Para 250 A

Formation of a Jhil chak in chak Dábar.

§ 32 *a*. A special feature of the assessment in this tahsíl was the formation of a chak Jhíl as already done by Mr. Channing in the neighbouring tahsíl of Gurgaon. Five villages lying lowest in the Najafgarh Jhíl were divided into two chaks, chak Jhíl, and chak Mustákil. The latter only has in each case been assessed regularly. The arrangement for the chak Jhíl is that the land will be assessed only when cultivated at rates varying with the crop as follows :—

Sugarcane Rs. 6/- per acre, per annum to be taken only if the crop ripens.

Melons and Rabi juár Rs. 1/8 per acre, per crop.

All other crops Rs. 3/- per acre, per crop.

All income thus realised I would give to the canal department.

The cesses also should be levied on the amounts thus due. These are the same rates as those used in Gurgaon and cannot I think be improved on. The system of course is popular. The villages were all suffering from over assessment, or rather from inelasticity of assessment, and the relief given by adopting the new method was urgently required as I made the distribution myself going over the whole ground, and noting down the demarcating line on the shajra field by field. I am confident that no undue concession has been made. As a matter of fact the first measurements made showed that no cultivation had been undertaken this year. It is true the Jhíl was full last autumn but under the old system revenue would have been due on this uncultivated land. The working of this part of the assessment will specially interest Deputy Commissioners who are fond of duck shooting. The areas in each village of the chack Jhíl are given below :—

Name of village.	Total area.	Minhal.		Malguzari Land.							
				Uncultivated.		*Cultivated.*					
		Lakheraj.	Barren.	Cultivable waste.	Lately abandoned.	Artificially irrigated.	Naturally irrigated.	Unirrigated.	Total.	Gardens and Groves.	Total Malguzari land.
Bahlolpur Dábar	561	...	24	7	...	...	530	...	530	...	537
Ráota	242	...	...	10	8	....	224	...	224	...	242
Zainpur	149	...	1	48	3	...	97	...	97	...	148
Shikárpur	679	...	5	100	...	...	574	...	574	...	674
Gumanherá ...	521	...	4	230	...	...	287	...	287	...	517
Total ...	2,152	...	34	395	11	...	1,712	...	1,712	...	2,118

Comparative statement of jamas.

CHAK.	1	2	3	4	5	6	7	
	Old jama, *i.e.*, average of five years 1872-73—76-77.	Amended produce estimates.	Jama at Settlement Officer's rates.	Jama at Commissioner's rates.	Jama at sanctioned rates.	Jama announced after appeal and review.	DIFFERENCES BETWEEN COLUMNS 5 AND 6.	
							Increase.	Decrease.
Khádar Bángar...	23,834	26,927	18,473	19,584	19,357*	20,871*	1,514	...
Bángar	1,63,562	1,43,089	1,58,550	1,58,550	1,19,054*	1,17,756*	...	1,298
Dahrí	89,477	1,14,284	96,326	94,813	90,570*	87,825*	...	2,745
Zerkohí	22,114	25,468	25,002	25,002	25,025	25,270	245	...
Kohí	11,322	14,357	14,073	13,338	13,327	13,120	...	207
Khandrát	8,237	12,402	11,762	13,150	11,612	10,550	....	1,062
TOTAL	3,18,546	3,36,421	3,24,186	3,24,437	2,78,945	2,75,392†	....	3,553

* That is at dry rates, not including owner's rate as in the old jama, the last ten year's average gives Rs. 48,158/- for owner's rate for the tahsil. The amount entered in form G, ultimate jama is Rs. 2,76,324/- ; the initial jama is Rs. 2,75,552/-, allowing Rs. 772/- as deferred revenue on protective leases. This is reconciled with the amount shown here by making the following allowances :—add to that amount Rs. 1,076/- for gardens separately assessed, and Rs. 246/- for resumed maáfis, and deduct Rs. 390/- on account of land taken up for public purposes and the Rs. 772/- above mentioned for wells,=Rs. 2,75,552.

† In comparing the present with the former jama it must be remembered that assessments have not been announced on three villages, Audhaoli, Karthwara and Khandrát kalan, as being under direct lease from the district. These jamas I put down as Rs. 25/-, Rs. 214/- and Rs. 2,550/- respectively : total Rs. 2,789/-. This brings my jama very near indeed to the jama at sanctioned rates ; only Rs. 764/- difference.

Para 251.

Report on civil station assessment.

Nazzul property held by the Municipal Committee.

§ 33. In connection with the assessment of this tahsíl reference may also be made to the assessment of the villages near the city and civil station of Delhi on which I reported separately. There are several villages here with considerable properties put under the charge of the Municipal Committee, who take the revenue and rent mixed up in a lump charge levied from the contractors holding the lands on lease, or directly from the cultivators. It seemed to me as Settlement Officer assessing the land of the district in the interests of the imperial exchequer that a distinction might well be drawn, and was perhaps intended by the Local Government to be drawn, between the revenue due on the cultivated land to the Government treasury, which is clearly an asset of imperial accounts, and the rent which the Local Government as manager of 'Nazzul' income might levy in addition to this revenue. It seemed to me that while the latter might well be made over to the Municipal Committee for special and local reasons of policy and convenience, to alienate the revenue was beyond the power even if it had come within the intention of the Local Government and I reported accordingly in detail showing the amounts which I considered due respectively to each account. My proposals, however, have not I believe, been accepted.

Sunipat Tahsil Assessment.

Para 252.

Assessment circles.

§ 34. There are only two chaks in this tahsíl and their long boundary is for the most part easily defined. The Bángar lies to the west of the old bed of the jamna (see Chapter I. under para. 7); in the same way as the Khádar lies immediately west of the present bed. A great part of the Khádar as before noticed has probably been at different times under the flood or flow of the river, and the soil is generally more sandy than the Bángar but there is an easily traced boundary running almost due north and south through the tahsíl where the Bángar begins with a rise, more or less sharp, to the west. For about half way up from the south this boundary lies very near the line of the old imperial road; in the upper half it lies more to the west of that line. The Khádar has 110 villages, the Bángar 129. Real, but more minute differences may be shown by drawing irregular lines from north to south as follows, beginning at the east:—

Minor differences, in each circle.

(1.)—The low riverain land, generally flat, but sometimes undulating with water channels on the lower grounds which in the August rains are filled with silt-carrying floods

(1).—Low riverain.

fertilising and destructive by turns. Sometimes the river side has been left uncultivated and has become a mighty waste of reed and grass, not unprofitable to its owners. Water is very near, and many of the wells kacha. In the best alluvial soil sugarcane is grown.

(2).—Main Khádar.

(2.)—Beyond this to the west as far as the Grand Trunk Road lies, the main and the best part of the Khádar, as described in Chapter I, there is a strip of dakar running down through it, and the rauslí soil if not very strong naturally is yet for the most part well cultivated and irrigated. Here too the water is near the surface, nowhere more than 20 feet off, and wells are numerous. The rope and bucket are used nearly as far north as Sunipat town, beyond this we find only the Persian wheel.

(3).—West Khádar.

(3.)—Beyond this again is a more sandy strip, sandy specially at and about Ganaur. It passes downward to the east of Sunipat, to Akbarpur Baranta and the south. The soil here is naturally inferior though in some parts it has been greatly improved by industrious cultivation. Both 'kacha' and 'pakka' wells are found, and water is still near the surface.

(4).—Bángar east ridge.

(4.)—Going still west we ascend the Bángar boundary ridge to the highest ground, I imagine, of the tahsíl. Here there is much good soil unirrigated, lying high and dry, the uncultivated portion of it generally covered with trees. The ábadís of the eastward villages here, which overlook the Khádar are often picturesquely situated at the edge of this woody 'Bángar.' Partial irrigation from the canal is practised in the lower grounds which have not as yet suffered from it. In a few villages to the south 'kacha' wells are sunk—and in not a few we find both Bángar and Khádar soil. The westerly villages of this part are some of the finest in the tahsíl, with fuller irrigation on broad levels over which the flow of water is easy and safe.

(5).—Canal valley.

(5.)—Beyond this passing westward we come to the valley of the canal which traverses the whole length of the tahsíl. Here is copious and long continued irrigation and the soil almost everywhere shows marks of exhaustion. Yet it is plain that the canal water before, by abuse, it turned into a curse, was for a considerable time, a blessing. The fiscal history of the villages shows that for long after the reintroduction of the canal (about 1,815 or a

little later) the quality of the soil continued to improve by reason of the valuable silt deposited by canal water on it. It was only when the process of water logging began that this benefit was first minimised, then neutralised by the destructive 'shor' rising up to the surface. Since then the evil has predominated more and more, till at present the culturable area is in some villages only a fractional proportion of what it was.

(6).—West Bángar.

(6.)—Most westerly of all is a thin strip on the extreme border of the tahsíl. Here the ground is higher and irrigation less extravagant. There are large level plains too in this part, where the soil is sound and good; where development of the village resources has not yet nearly reached its maximum. The land in quality is a light rausli, and the levels in many places allow only of irrigation by 'lift.' The proportions of soils in the two assessment circles are:—

	Dákar	Rausli	Bhúr
Bángar	25 per cent.	71 per cent.	4 per cent.
Khádar	13 per cent.	80 per cent.	7 per cent.

A good deal of the Bángar Dakar has no doubt been produced by the deposit of canal silt and vegetable decayed matter, under the system of canal irrigation. The Bángar rauslí is superior to that of the Khádar.

Para 253. Crops in the two chaks.

§ 35. The areas of the different crops for the district generally, have been noticed in Chapter III. For this tahsíl the principal crops in the Bángar are wheat and gram, and mixtures of these with barley for Rabi, in Kharif sugarcane, cotton and rice; juár and bájra; and for fodder, juár. The Khádar has no rice, but a lot of juár in places. Sugarcane, juár and cotton are the most important crops. In Rabi the crops are those of the Bángar. The relative percentages are given below:—

Chak.	Wheat.	Sugarcane.	Cotton	Juár.	Gram.	Wheat and Gram.	Rice.	Bájra.
Khádar ...	33	4	6	22	7	5	3	4
Bángar ...	25	10	6	22	8	8	6	4

Chapter XI.] The Assessment.

Para 254. Reason for giving, pretty fully, facts of revenue rate report.

§ 36. I proceed to give pretty fully those parts of the Sunipat Revenue Rates Report, which deal with the assessment and the reasons therefor. I do this because the assessment though partly based on produce estimates depends in a great measure for its justification, on a comparison of the present with the former assets and resources, and on the results which Mr. Edmonstone's assessment has produced on the condition of each particular village as ascertained by careful inspection throughout the tahsíl.

Para 255. Increase of 'waste' in the Bángar.

§ 37. Since settlement there has been a noticeable increase of waste, in the Bángar chak from 20,144 acres to 22,687 as the extent of land entered, as culturable in the statistics certainly includes all that can possibly be thought fit for cultivation, and a good deal more, the real state of affairs is not more favourable than is here represented. A still more serious point is that a considerable proportion of this waste is new, that is to say, the land now under cultivation was much of it formerly uncultivated, and sometimes considered unculturable. In place of this, land has fallen out of cultivation, as really barren through shor. So that the character of the soil available for expansion of cultivation has deteriorated, and is deteriorating more than might be imagined from the area statistics. When all the available soil has been thus brought into use, the decrease in the cultivated area unless checked by other means, will become decided and apparent. I regard this as one of the leading facts for the new assessment of this chak.

Meaning of this fact.

Increase of cultivation in the Khádar whence made.

The increase in the Khádar cultivated area would seem to have been made pretty equally from the "culturable" and the "unculturable" land. If not, a large extent of the formerly so called "unculturable" has now been put down as "culturable." Probably both of these changes have taken place.

Changes in cultivation and irrigation summed up.

The changes in cultivation and in irrigation as shown in statement A, may be summarised as follows:—

	Cultivated.	Uncultivated culturable.	Uncultivated unculturable.	Irrigated.
Bángar ...	−17 (·01 per cent.)	−2,040 (7·4 per cent.)	+2,543 (12 per cent.)	−4,652 (34 per cent.)
Khádar ...	+19,642 (38 per cent.)	−9,412 (19 per cent.)	−8,228 (40 per cent.)	−455 (1 per cent.)

The irrigated area does not include the canal irrigation, so that the falling off in the Bángar though it is to be regret-

ted, is not strange. The figures of the Khádar area are misleading. There has been no doubt an increase in the permanent means of irrigation; the mode of calculation I cannot but think, must have been different, 1,509 new pakka wells have been sunk here. As a fact showing the development of the tahsíl the increase in the area under garden cultivation may be noticed; from 34 acres to 917. Nearly all these gardens have been assessed, and the results for the whole district are given further on (see para. 274).

Canal area.

In the canal area there is a decrease of 13,495 acres, but this too is at least partly nominal. The last figures are those of the year of measurement, when irrigation was under the average. The annual average for 30 years is 54,354 acres.

Markets and general development.

The markets for Sunipat produce are and indeed for a long period have been good. The great population of Delhi is a valuable outlet for all kinds of grain and pulse, while Meerut on the other side of the Jamna takes a great deal of sugarcane, the most valuable of all crops. The general expansion of population has of course improved the market, and the same may be said of the improvements in road communication: There is the Grand Trunk Road, an inestimable boon for the heavy traffic, and the cross roads though far enough from being what they ought to be, are considerably better than they were in 1842. Prices too have risen as has been noted in para. 227, and this rise is to some extent one in value as well as in price. In some crops the rising tendency has been uniform, as in the case of the important staples, sugarcane and wheat, gram, maize and bájra. For others the highest price was reached in the quinquennial period 1864 to 69, which included the famine year 1868. It is not likely that the staples will fall to their old prices. Especially favourable to the zamíndárs is the estimate of 34 sers per rupee for gram, adopted for purposes of assessment. It is not rash perhaps to say that this rate will never again be seen in Delhi.

Rise in prices.

Increase in population.

The increase of population has been large. It has been said above (in para. 84) that the latest figures for the district generally are those of 1868; but for 21 canal villages in Sunipat, a census was taken in 1877. Its object was primarily for sanitary statistics, but the figures are useful as showing in a somewhat given way what the canal, when misused, can do in the way of destroying human life. Their force cannot be properly understood unless they are compared so far as they may be with the population statistics of the tahsíl. These may be exhibited in the following form, and show a very large increase of population indeed, :—

YEAR.	Total population.	Bángar population.	Khádar population.	Agriculturists.	Non-agriculturists.	Bángar agriculturists.	Khádar agriculturists.	Bángar non-agriculturists.	Khádar non-agriculturists.
1842	1,12,271	71,586	40,685	61,709	50,562	38,353	23,356	33,233	17,329
1854	1,29,871	81,990	47,881	72,643	57,228	44,161	28,482	37,829	19,399
Per cent. increase on population of 1842 since 1842 ...	15·67	14·53	17·68	17·72	13·18	15·14	21·95	13·83	11·95
1868	1,67,897	1,07,165	60,732	89,425	78,472	55,445	33,980	51,720	26,752
Per cent. increase on population of 1842 since 1854 ...	33·83	35·17	31·59	27·19	42·01	29·42	23·54	41·8	42·43
Total per cent. increase on population of 1842 since 1842	49·5	49·7	49·25	44·91	55·19	44·56	45·49	55·63	54·53

There is no reason whatever to suppose that since 1868 the general condition of the tahsíl will be found to have stopped increase of population altogether, though the rate of increase may have been retarded. But look at the facts in these canal villages, there is an absolute decrease of population: this decrease in such parts, is quite as significant as is the general increase in the tahsíl taken as a whole; the figures are these:—

YEAR.	Total population	Agriculturists.	Non-agriculturists.
1842...	18,118	10,376	7,742
1854...	20,437	11,690	8,747
Per cent. increase on population of 1842 since 1842	12·79	12·66	12·98
1868...	26,941	13,898	13,043
Per cent. increase on population of 1842 since 1854	35·89	21·28	55·49
1877...	25,768	13,388	12,380
Per cent. increase on population of 1842 since 1868	6·46	4·92	8·56
Total per cent. increase on population of 1842 since 1842...	42·22	29·02	59·91

These are the chief facts showing the present state of the tahsíl considered as a revenue paying tract, in comparison of its condition when assessed by Mr. Edmonstone.

Para 256. Assessment of the Khádar.

§ 38. The materials I found available for forming revenue rates in the Khádar chak (which I took up first) were:—

Chapter XI. The Assessment.

1.—Mr. Edmonstone's rates at the settlement in 1842.

2.—The rates proposed by the Commissioner for Ballabgarh, which I knew had been sanctioned.

3.—The produce estimates founded on experiment, as in the other tahsíls.

Comparing these data I set out inspecting villages with the following anticipatory rates as being likely to suit irrigated land Rs. 3/-: Bárání Dakar or Rausli Rs. 1/8/-: and Bhur Rs. 0/14/-. Working on thus, and referring to any cross-lights I could get in any way, whether from considering the rates apparent in the case of villages fully assessed and doing fairly, or from gauging the estimates and opinions as to produce supplied by zamíndárs, and using carefully any information derivable from the presence of cash rents here and there, I soon arrived at the conclusion that the official produce estimates were as a rule excessive, and altogether untrustworthy; and I also found that some softening down of the proposed rates was necessary. I eventually adopted the following:—

Rates.

Irrigated land Rs. 2/12/-. Dakar Rauslí (dry) Rs. 1/6/- and Bhur Rs. 0/12/-. These are the rates which were sanctioned for Ballabgarh except the Bhur, which there had been 14 annas; and they were also sanctioned here by the Financial Commissioner in his No. $\frac{23}{S.}$ C. daded 21st June 1879.

Para 257.

Assessment of the Bángar.

§ 39. The assessment of the Bángar was a much more complicated problem than that of the Khádar. There were here three factors of uncertainty of a special kind to cause anxiety:—

Difficulties.

1.—In a few years the circumstances of irrigation will be altered for almost every village in the chak.

2.—The varying, and to a certain extent, ungauged injury caused by 'shor' or 'reh.'

3.—The introduction of a material change in the mode of assessment by levying the land revenue on the unirrigated aspect of the soil.

Impending changes in irrigation power.

The first point is evident; the change referred to follows necessarily on the realignment of the canal, and it brings with it consequences for which accurate allowance can hardly be made at present. As regards irrigation the chak may be divided into five parts:—

1.—The villages east of the new line:—

2.—The villages on the new line:—

3.—The villages between the two lines:—

4.—The villages on the old line:—

5.—The villages west of the old line.

For sets 1 and 2 there is every probability of an increase of irrigation for sets 4 and 5, of a decrease; and it is evident that the change in every single case alters the problem of assessment. The case of villages in set 3 is still more complicated; it is almost impossible that the advantages of irrigation should remain the same under the new line of canal as under the old. A glance at any village will show this. But how great, and in what direction, will the change be, it would be impossible even for an experienced engineer to say yet, until the new system comes into full play.

Para 258.

'Reh'

difficulty of ascertaining accurately the damage done by it.

Various stages described.

§ 40. The existence of the evil of 'reh' and its extensive impoverishment of the soil are too well known now to require to be dwelt on at length. But it seems proper to draw attention to it here, as it constitutes the most harassing difficulty of all. It is really impossible to tell in places how far the damage has spread. Here and there to be sure ruin unmistakeable, bare, and perhaps complete, is apparent. Whole tracts of land, formerly most productive, are lying barren; white with the saline efflorescence when dry, or when wet foul with a stagnant and sickening vapour that once perceived is characteristically distinguishable: and is at times so strong in its odour as to give the sense of being eaten like food. At this point there is no doubt of the damage. But there is a second stage, reached before the final ruin wherein the corners of fields look unhealthy; perhaps they have a few stunted stalks on them, perhaps they are quite bare. The middle of the field which has a crop, has also here and there small patches of white or barren soil, telling too clearly of the diminished yield. But the effect of several of these patches irregular in shape, and scattered in diverse quarters, is to make any estimate of the produce of the field very uncertain.

(1).—Ruins.

(2).—Second stage.

There is, however, even before the second stage an inceptive one, where the devastation has only just begun. Here no 'shor' is apparent on the surface of the soil, but the unhealthy look of the crop or it may be (as in wheat) a kind of withered precociousness in the ears shows, that things are not as they should be. The fields to a casual glance bear

(3).—Inceptive stage.

their usual variegated burden of yellow, and white and green, but the zamíndár knows to his cost that 'the curse has come upon him'—'*paidawar kam hone laga.*'

Para 259. Change in method of assessments

§ 41. The third difficulty in assessing this circle is one, which with the first above-mentioned is also met in the canal assessments in Delhi tahsíl; so that remarks on it apply to both tahsíls. The question, however, first came to me in Sunipat, and as a matter of fact the assessments of Sunipat were announced before those of the sadar tahsíl. The few comments therefore which seem necessary on this point may be conveniently made here. The land is to be treated in its 'barání' or rather (for I think there is a difference in the terms) in its "*unirrigated aspect.*" This expression may mean either of two things—1st land considererd as not only unirrigated, but as never having been irrigated. This is the only sense in which it can be accurately called 'barání' and it is equivalent rather to "unirrigable" than "unirrigated," though there is to be sure the possibility of canal irrigation being extended to it in the future. The words, however, as applied to land habitually irrigated by a canal, and considered with regard to the general tenor of the Government instructions on canal assessment in this district, seem to me likely to mislead. For us a more honest meaning of the words is:—the state of the ground as it would be if, other physical features remaining the same, the irrigation of that particular piece of ground were taken away. As compared with the first meaning, there are differences here: there is the actual amelioration of the soil produced by the valuable silt deposit of the canal water, together with the decayed vegetable matter usually found on canal land. There is also the percolation certainly to be expected from adjacent fields in which, from the hypothesis, irrigation will be going on. Thirdly there is the humidity available from the evaporation going on in the ponds, and distributaries, and the canal itself; for as noted above all these things remain.

'unirrigated aspect' meaning of the terms.

The Commissioner of Delhi indeed in reviewing the Panipat revenue rates report wrote. "I see no reason for "assessing canal irrigated land in its unirrigated land, at a "rate higher than the dry rates fixed for the different kinds "of soil in this circle." But surely if these differences that I have just noted exist, there ought to be a special rate for land habitually irrigated, but for the nonce left unirrigated. If nothing else were considered, there is at least the improvement of the soil which often takes place under healthy canal

irrigation. Part of its transient benefits have as a fact become permanent, and it is only fair to represent those advantages in the rates assessed on the "unirrigated aspect."

Para 260. Owner's rate.

§ 42. Beside the rate on the "unirrigated aspect" of canal land, the only complement available to make up a full assessment is the 'owner's rate.'* This has been fixed at one-half of the 'occupier's rate,' and the latter may be taken without chance of any material error as averaging nearly Rs. 3/- per acre. The "unirrigated aspect" rate therefore will for each village be its full (wet) assessment, about Rs. 1/8/- per acre of canal irrigation. This is what I have aimed at securing, and in doing so the 'dry' assessments of not a few villages stand at a figure which without considering these points might seem too high.

Para 261. * Rates for the Bángar.

§ 43. The rates I proposed for this circle were :—

Irrigated land Rs. 3/-. Dry Raúsli and dakar Rs. 1/8/- and Bhur 14 annas. The Commissioner remarking that in Delhi tahsíl the first kind of soil had been rated at Rs. 3/-, and in Karnal at Rs. 2/14/-, proposed to take the mean at Rs. 2/15/-. He also reduced the Bhur rate to 12 annas; and his alterations were accepted by the Financial Commissioner. The following statement shows the result of assessment in both chaks of the tahsíl, and the general total resulting therefrom :—

Results of assessment in the tahsíl.

1	2	3	4	5	6	7	
CHAK.	Old jama, *i. e.* average of 5 year's demand 1872-73-1876-77	Jama at sanctioned Rates.	Jama announced, *i. e.* dry rates on canal.	Owner's rate based on 10 years' average irrigation.	Gross estimated assessment.	*Difference between columns 3 and 4.*	
						A. Increase.	B. Decrease.
Khádar ...	1,24,043	1,45,930	1,41,815	...	1,41,815	...	4,115
Bángar ...	2,77,265	1,81,982	1,94,685	74,504	2,69,189	12,703	...
Total of Tahsíl...	4,01,308	3,27,912	3,36,500	74,504	4,11,004	8,588	...

* I purposely omit any controversial remarks on this well-worn but not by any means disposed of matter, as on the leading points, its being treated as canal revenue, and its being levied at a uniform rate, my ideas have by the prevalent official opinion been rendered heretical.

The ultimate jama in Form G. is Rs. 3,38,267/-, the initial jama is Rs. 3,37,870/-, allowing Rs. 397/- on protective leases. To reconcile that with this amount, we must add Rs. 1,767/- assessed on gardens to this Rs. 3,36,500/- and deduct the Rs. 397/-=Rs. 3,37,870/-.

Para 262. Announcement of jamas

§ 44. I submitted the revenue rates report at the beginning of December 1878, and received orders in June of the following year, and in accordance therewith announced my detailed assessments in various places in the tahsíl. The Delhi assessments were made known at the same time. In Sunipat there was only one appeal and that was dismissed; in one or two cases there were murmurings when I doubled the jama or nearly so, but in one of these the wealthy proprietor* who stood up to argue the point was so fairly and plainly refuted as to facts, that there was no trouble afterwards. About one or two other villages† I had some doubt at first whether they might not properly receive the concession of progressive jamas, but finally concluded that there was no need to propose this.

Para 263. Comparison of old and new jamas uncertain.

§ 45. The comparison of the new with the old assessment must of course take account of the element of uncertainty, introduced by the new method of separating the owner's rate from the land revenue. If it could be supposed that the average irrigation of the last ten years will be maintained under the new system, the result of the revision of assessment in this tahsíl would be an increase on the whole of Rs. 11,463/-. But this supposition is not likely to become fact, and it would be a calamity for the zamíndárs and (therefore) eventually for Government if it did. This point is, I believe, agreed upon by all departments, and has indeed been recognised officially in the Government proceedings, which called for opinions as to the best way of restricting irrigation in the canal villages. My opinion then was and still is that the change in method of assessment will of itself induce the zamíndárs to take less water, and that till it is seen how far they are influenced thus it would be premature to take other steps. Should it prove to be the case that the agriculturist finds it pay him now to take much less water than hitherto, even under the condition of a decrease in the production of his estate, then it seems to me the old assessment stands self condemned, for it is shown that a

Why.

Prospect of restricted irrigation.

* Manphul of Jakhauli, whose village Seoli I raised from Rs. 847/- to Rs. 1,600/- jama.

† Sunperah, raised from Rs. 634/- to Rs. 1,150/-; and Bazidpur Sabaoli, raised from Rs. 1,051/- to Rs. 1,600/-.

forced and exhausting system of agriculture has been pursued as necessary to make possible though only temporarily possible the payment of the Government revenue. And I have as said before little doubt that in a considerable degree this will happen, I expect that for a few years there will be a large decrease in the yearly area of canal irrigation. Then there will be a kind of reaction and more water will be asked for, I do not advise that all the requests of the zamíndárs then be granted, but I do hope that the irrigation department will be able to bear the strain which a recurrence to irrigation under such circumstances might put on their arrangements on other parts for the supply of water. I sincerely hope that the mere fact of having once given up water will not of itself be considered a sufficient reason for refusing it altogether afterwards. The matter is of extreme importance: it is perhaps the turning point which will decide the question of prosperity or the reverse for the great body of canal villages throughout the district.

Subsequent reaction.

The Settlement Officer's earnest hope!

§ 46. In his Settlement Secretary's No. $\frac{S.}{3957}$ of 7th June 1880, the Financial Commissioner called for a list of those villages which from the high rate of the incidence of their new assessment might be thought to be rated at more than a true dry rates jama. A list was also called for of the villages which owing to exceptional and (it is to be hoped) temporary swamping and bad drainage are now rated at something less than a true dry assessment. For the latter it will be provided that revision of the jama if necessary in the interests of Government shall take place after periods of five years. In my reply to this I stated that in the Delhi tahsíl no villages need be noticed prominently in this way, as being assessed at higher than a true dry rate: there are some indeed near Delhi, such as Azádpur, Nimri, &c., with a high rate of incidence, but I think it almost certain that if canal irrigation were decisively diminished they would sink wells, and if they did they would probably be as well off as at present.

Para 264.

Villages under canal irrigation assessed at more than a "true dry rates assessment."

In Delhi tahsíl none.

For Sunipat I mentioned four villages, Ahulana, Bali, Kutbpur, Pugthalla and Mohana as partially dependent on canal irrigation for their ability to support the high assessment put on them, but I noted that they all could probably do with less water than they at present have, and that before entering on any question of reduction of revenue as necessary on restriction of irrigation it should be ascertained whether wells could not be sunk and that if they could little or no reduction could be necessary.

Sunipat tahsíl four.

Villages assessed under a "true dry assessment."

20 1 in Delhi 19 in Sunipat.

In reply to the enquiry as to villages assessed at something less than a true dry assessment. I submitted a list of 20 villages 1 in Delhi and 19 in Sunipat.* But in doing so I laid stress on the fact that the best judges of any future question arising as to revision of assessment would be the District Officers of the time, and that I should deprecate any action which would have the effect of embarrassing their free decision of each case on its merits. This point I urged also with regard to the villages assessed above the true dry rate; and at the same time I should not wish to stop or hinder enquiry into the case of other than those villages mentioned. Taken as suggestions merely I believe the lists will be useful in a material degree, but they should not be considered as more than this.

Para 265.

General points in the assessment alluvion and diluvion.

§ 47. A few points which in their nature concern the whole assessment of the district still remain to be noticed; and first that of alluvion and diluvion on the river Jumna:—

Rule of property on the Delhi riverain.

As the river runs down on one side of the whole length of the district the yearly di-alluvion work forms an important feature of the revenue administration. The Jumna, however, is not nearly so violent or capricious as the Punjab rivers generally speaking are, and its incursions are rarely sudden or unforeseen. There are altogether 92 villages in the district at present bordering on the stream; 24 in Sunipat; in Delhi 24 and in Ballabgarh 44. The boundary for revenue purposes throughout is as noted in para. 189 note, the deep stream of the river, but for proprietory right the custom is various. In Sunipat for all the 24 villages the deep stream determines the property (machha súí); in Delhi only 7 use this rule; in the remaining 17 villages the proprietor keeps his land whether on this side the stream or not (mu'aiyan-ul-hadd). In Ballabgarh more follow the deep stream, and 35 the fixed boundary. The practice in dealing with di-alluvion before the present settlement was to take notice only of alterations aggregating 10 per cent of the culturable area, but by Financial Commissioner's Circular No. 26 of 1873 report was called for as to the working of the current system. In his reply the Settlement Officer stated that the 10 per cent rule was very unpopular. Most of the riverain villages were Bhayachara, and in such villages the proprietors of lands carried off by diluvion might be great losers if not actually

Previous rule as to treatment of di-alluvion

* The Sunipat villages were:—Anandpur, Chitána, Chatia Dewa, Jáji —Jahmalpur or Lohan Tibba, Juan, Jharant, Jharauti, Khubrú, Kascorí, Koaltí, Khea Dahya, Mahipur, Nirthán, Rahimáva Salempur Turali, Saidpur, Thána Khurd, and Thana Kalan:—the Dehli village was Holambi Kalan.

ruined. In only two cases was it the practice in such circumstances for the community to compensate the proprietor by the gift of village common land. In one the pecuniary loss of having to pay the revenue was borne by the village. In one the proprietor would get in compensation land (if any) recovered from the river. In six the unfortunate was given leave to cultivate the common land as a tenant

And practice of the villages as to internal adjustment.

Orders were at first received to continue the old system, but finally in 1876 on a second reference by the Commissioner (Colonel Davies) the Financial Commissioner sanctioned the adoption of the present system under which every case of increment or decrement, however small, is taken up year by year. There is no question of the superior equity of this rule as well as of the advantage which it secures of a more accurate record from year to year of the changes caused by the action of the river. The di-alluvion measurements for the season 1879-80 were checked with special care under my personal superintendence. There was a good deal of trouble in changing the basis of assessment from the old (estimated) areas which had up to that time been kept, to the new measurements, but after several times making mistakes the subordinates took in what was wanted, and matters were set right. No effort was spared to bring the papers accurately up to date, and I trust now that no trouble will be experienced by the district authorities. The results of river action since 1876 are shown in the following statement:—

New rule every change is dealt with.

Check of di-alluvion measurements in starting the new settlement.

Year.	Alluvion.					Diluvion.		Net Result.
	Area gained.	Jama imposed.	Area put under enhanced rates.	Additional Jama.	Total increase.	Area removed.	Reduction of Jama.	Difference in Jamas.
1876-77 ...	1,199	331	372	266	597	2,615	1,940	-1,343
1877-78 ...	1,494	561	19	14	575	187	313	+262
1878-79 ...	1,207	629	12	2	631	2,292	3,136	-2,505
1879-80 ...	1,795	1,460	50	49	1,509	2,690	3,243	-1,734

Statement of alluvion and diluvion.

The petty character of the diluvion in 1877-78 is explained when it is remembered how terribly the rains failed in that year.* †

Para 266. Maafi investigations.

§ 48. The maafi investigations in the settlement were important and protracted, though there is not very much to show for the work in the number of cases reported for orders, as most of them seemed to require none. Those that appeared to be supported by the requisite authority have been entered in registers prepared in English, which are now being made over to the district office. The others have been reported for the orders of Government under my No. 235 of 21st July 1880.

Authority.

The authority under which the enquiry has been made is the letter No. 7481 of 29th October 1872, from the Secretary to Financial Commissioner to Commissioner Delhi. From this letter I make the following extracts which are practically the most important, as regards the procedure to be adopted:—

Moderation in assessing new alluvial land.

* I hope I may, without seeming dictatorial, record a note here as to the expediency of observing great moderation in assessing newly thrown up alluvial land (nau-baramad). Riverain villages are rarely prosperous, and there are perhaps several reasons why under our system of assessment such should be the case, and some of these unavoidable. But it sometimes occurs that the misfortunes of the village are unnecessarily increased by the injudicious haste of the inspecting officer in taking full rates on newly thrown up soil. I believe it is hardly ever the case that river soil is good for much on its first year of accretion; and certainly in this district it is almost always inferior. I would suggest that the inspecting assistant or Extra Assistant Commissioner should be directed as a standing rule to see that the rates proposed by the Kanungo and Tahsildar for new alluvial soil are moderate; and that in dealing with these assessments the Deputy Commissioner should himself occasionally ascertain by personal inspection that this moderation is kept up.

Shikargah Tilori.

† This seems a convenient place to notice the case of the boundary dispute of Shikargah Tilori in Ballabgarh. This Government estate had its origin in the arbitrary formation of a hunting rakh by the Raja of Ballabgarh, by appropriating a portion of the lands of each of the villages Kabulpur Khadar, Tilori Khadar, Rajpur, and Phulera. This property was taken over by our Government as part of the confiscated land of Ballabgarh, and a few years afterwards the boundary with the opposite villages in Bulandshahr, which up to that time had been fixed, was changed to follow the deep stream. The Deputy Commissioner did this, so far as I could learn, on his own authority. As it happened the river took a decisive turn to the east and the accretions to the Shikargah were very large. Thus the property which in 1862 was only 531 bigahs, in 1865 became 1835 bigahs, and at the measurements of the present settlement 2463 bigahs. Suits were brought against Government by the villagers to recover some alluvion land. I was appointed arbitrator and fixed the boundaries of Shikargah with Kabulpur, Rajpur, and Phulera, on this side the river, and with Garhi Sarmastpur on the other. Minute directions as to these boundaries have been recorded in my English order on the case, and it might be noted with advantage at the yearly river-action inspections whether they are accurately observed.

"In consequence of the destruction of the district "records in 1857, it was found necessary to prepare fresh "registers after the restoration of order. The materials "for these were in part registers obtained from the "Government Office North West Provinces, and in part "copies of district registers preserved in tahsíl. In some "cases also information was obtained from copies of settle- "ment records saved by patwaris."

"It will be your duty to examine these registers, and "if you find them incomplete to endeavour to supply their "defects. All grants which can be shown to have been "included in the registers of land released in perpetuity "which were maintained before the mutiny, either by the "existence of authentic copies of those registers, or by the "production of the certificates furnished to the holders, "must be regarded in the absence of any express limitation, "by the terms of the grant as hereditary and transferable. "In these cases you will only have to ascertain that the "present possession corresponds with the extent of the "grant, and that the present holder can show a good title "derived from the person whose name was originally entered "in the register."

Grants in perpetuity.

(ii).—Life grants were to be considered as non-transferable and persons in wrongful possession were to be ousted, unless for any reason it should seem fit to make recommendation to the contrary.

Life grants.

(iii).—"In the case of grants under 10 bigahs for religious "or charitable purposes, included in the separate register "of such grants, it will be necessary only to ascertain "that the grants are still applied to such purposes, "and that the area entered in the register is not "exceeded."

Grants under 10 bigahs.

(iv).—Perpetual grants after 1858 were to be considered as not transferable, those made before the mutiny as transferable.

Grants in perpetuity.

With regard to the kind of 'maafi' known as 'nisf-rit'* tenures the instructions were to resume them ordinarily unless for special reasons it seemed fit to recommend a continuance of the grant in the shape of a maafi on part of the land in question. These concessions have almost uniformly been found to require no further continuance,

(1).—After 1858.

(2).—Before 1858.

* One of those mongrel words that have taken root in the popular language: it means of course half rate.

and having come to the natural term of their grant, *viz.*, the end of the current settlement, have been resumed the area affected, being put in with the khalsa area and assessed at full rates.

Registers.

The 'maafis' which seemed to require no further order have been registered in seven divisions, parts or registers as follows:—

I.—Register of grants in perpetuity, transferable.

II.—Register of grants in perpetuity, not transferable.

III.—Register of grants for life or (a specified number of) lives.

IV.—Register of grants made during existence of grove or of some building connected with the land, more than 10 acres in extent.

V.—Register of similar grants, less than 10 acres.

VI.—Register of Ináms.

VII.—Register of grants for planting way side groves.

Registers IV and V might have been one but for the standing order, that where a separate Register of the nature of No. V existed it was to be kept separate.

Para 267.

Mode of proceeding.

§ 49. In making the investigations I have not gone behind the registers received from the district. I directed my attention more specially to ascertaining that the present possessor could show a fair title, and that the area of possession fairly corresponded with that entered in previous papers. Small differences of area either in excess or deficiency have not been taken account of, wherever in fact it could fairly be presumed that the difference was one of measurement the area was left alone. When an excess was found not to be satisfactorily accounted for, it was resumed. The final order in each case has been passed by me with a brief remark in autograph, and I believe the enquiry has been complete. One or two cases presenting special features may be noted.

Para 268.

Kheri Taga maafi.

§ 50. A mistake no doubt was rectified in the matter of the Kherí Taga maafi in Sunipat. Amánullah Beg held there a revenue free tenure of 302 bigahs 4 biswas in perpetuity. The grant had originally been made by Sháh Jehán to Anwar Beg the great-great-grand father of Amánullah Beg. In 1848 the revenue board of the North West Provinces intimated that the grant in perpetuity was to be considered as recognised by our Government, but in 1857 the collector of Panipat resumed it, "because the maafidar was

a Captain in the King of Delhi's service, and fought against us." Amánullah Beg had a house in Delhi, and this was also attached by Mr. Cooper in 1861 on the ground of the suspected disloyalty of the Jágírdár. Next year, however, the same officer declared in a rubakár of 11th August, his conviction of the innocense of Amánullah, whose great age and infirm habit of body would alone have been sufficient to prevent any co-operation with the mutineers. The house was then released, and also a small maafi of 3 bigahs 14 biswas in Banskáuli. In 1864 petition was made to the Deputy Commissioner Mr. Thornton, for the release of the jágír, but refused. At settlement another attempt was made: Mr. Wood investigated and reported the case, and the jágír was released.

Para 269. The sons of Salig Ram.

§ 51. The sons of Salig Ram applied for a continuance of the jágír granted to him and to Mathra Dás, *viz.*, the villages Azádpur and Wazírpur. But it was reported by the Settlement Officer that the grant was only one for life, and of the nature of istamrár, and that though the son of Ganeshi Lall another life grantee had obtained half his father's jágír, the example could not well apply to the present case where the sons of the deceased jágírdár were all well off, and Salig Ram had enjoyed the grant 12 years himself. In the other case the grantee had died very soon after the grant, and his son was of tender age. The Secretary to Financial Commissioner in his No. 115 of 8th January 1878 intimated that the application had been refused.

Para 270. The grant to the heirs of Baldeo Sing.

§ 52. Among the victims of the fatal out-break in May 1857, was Buldeo Sing darogáh of the bridge of boats killed in cold blood by the rebels, at his post. A grant of 101 bigahs in the villages of Shakarpur on the side of the Jamna was made to his widow and heirs, but before receipt of sanction the land had been wholly carried away by the action of the river, rendered more sudden and violent by the construction of a small band in the river bed below the city, by the canal authorities as subsidiary to the Okla 'band' lower down. A second application was made through the Deputy Commissioner for 100 bigahs in Ghyaspur* and Secretary to

* The report in this case was considerably delayed by the want of a certain record, showing the extent of Government right in Ghyaspur. It appears that a deceased 'muháfiz-dáftar' had in this instance behaved very suspiciously, but no one now could be made responsible. The general state of the vernacular files in the District Office does not seem to have been good for some years past. In order to help the Deputy Commissioner to set things right, I ventured to depute muharrirs for some months to be paid from Settlement Fees.

The district record office.

Government's No. 256 of February 13th 1880 sanctioned this. The land now given is more valuable than that of Shakarpur was.

Para 271. Grant to Ahmad Khan of Sahopura.

§ 53. The case of the grant of the village of Sahopura in Ballabgarh may also be mentioned. The Government of India had directed, that Ahmad Khán formerly Kotwál of Ludhiána should for services rendered in the mutiny receive the proprietory right of two confiscated villages in Ballabgarh, *viz.*, Chirsi and Sahopura paying a revenue of Rs. 1,145/- per annum, or an equivalent grant if this could not be arranged for. The old assessment of these villages was Rs. 1,106/-, but under the revision of settlement they would pay Rs. 1,530/-, *viz.*, Sahopura Rs. 1,200/-, and Chirsi Rs. 330/-. The question was accordingly referred for further interpretation of the intentions of Government, and in his No. 1,315 of 8th December 1877, the Secretary to Government explained that the grant was evidently intended to be one of land assessed at Rs. 1,145/-, and that the proprietory right in Sahopura assessed at Rs. 1,200/- would by itself amply satisfy the conditions of the gift.

Para 272. Owner's rate in jágír villages.

§ 54. It seems well here to note that special orders of Government have been taken in the matter of the enjoyment of owner's rate in jágír villages. There are very few in this district which can come into question, as for the future grants of jágír and maafi will not include owner's rate. A report has been made for orders in each case, but the result has not yet been communicated. A report on maafis similarly circumstanced will no doubt be called for, and with this in view a list 'of maafis' is being made over to the Deputy Commissioner.

Para 273. Statement showing maafis in Delhi

§ 55. The result of the maafi investigations may be shown as follows:—

Abstract of the Maafi Registers Delhi District.

No.	Nature of the Maafi.	*Of land not assessable as being barren &c.*				*Assessable at less than Rs. 5/-.*				*More than Rs. 5/- and less than Rs. 10/-.*				*More than Rs. 10/- and less than Rs. 20/-.*				*More than Rs. 20/- and less than Rs. 50/-.*				*More than Rs. 50/- and less than Rs. 100/-.*				*More than Rs. 100/-.*				Grand Total.
		Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	Delhi.	Ballabgarh.	Sunipat.	Total.	
1	Perpetual and transferable ...	34	1	...	35	165	14	2	181	101	19	...	120	89	12	...	101	30	5	1	36	8	3	2	13	6	7	5	18	504
2	Perpetual but not transferable ...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3	3	1	2	6	3	4	...	7	...	6	2	8	24
3	For life or lives (specified) ...	...	2	...	2	3	57	...	60	2	31	...	33	4	22	...	26	8	24	...	32	3	4	...	7	2	5	...	7	167
4	During existence of groves or buildings connected with the maafi more than 10 acres	...	...	...	...	...	1	...	1	2	1	...	3	10	20	1	31	20	19	1	40	6	2	1	9	3	3	...	6	90
5	Do., less than 10 acres	...	...	...	...	10	43	3	56	26	22	6	54	23	2	2	27	12	..	...	12	...	...	...	...	1	...	...	1	150
6	As Ináms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	2
7	For planting groves	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	...	...	...	...	...	...	...	..	...	...	...	...	...	...
	Total ...	34	3	...	37	178	115	5	298	131	73	6	210	129	56	3	188	73	49	4	126	20	13	3	36	13	22	7	42	937

The aggregate amount of assigned revenue in the Delhi District is now Rs. 53,189/-.

Chapter XI.] The Assessment.

Para 274.

Assessment of gardens.

§ 56. The gardens in some parts of the district are numerous and very profitable. There has been therefore no necessity to observe the same liberal indulgence which has been exercised in this matter in the more arid tracts of Gurgaon. As a rule the Delhi gardens have been assessed; and statement below shows what a considerable sum of revenue is thus obtained. In number they are as follows:—in Delhi 359: in Ballabgarh 177; 737 in Sunipat. Registers have been prepared tahsílwár showing the extent, ownership, numbers and kinds of trees and assessment levied in each case. The gardens on which no revenue has been assessed are 52; the reasons for making the exception have been noted in the register.

Tahsil.	Less than 1 bigah.	Less than 5 bigahs.	Less than 10 bigahs.	Less than 20 bigahs.	Over 20 bigahs.	Total.
Ballabgarh ...	38	93	30	12	4	177
Delhi ...	71	182	56	34	16	359
Sunipat ...	325	340	53	18	1	737
Whole district ...	434	615	139	64	21	1,273

The extent of all the gardens is Rs. 2,665/- acres, assessed at Rs. 4,684/-.

Para 275.

Protective leases on wells

§ 57. Protective leases on wells newly made or repaired were given under the provisions of B. C. VII of 1866 in 98 cases. In Delhi 36; Sunipat 13; Ballabgarh 49. The annexed statement shows the total amount and the details of the revenue which Government in order to protect capital from being taxed has for the time surrendered* the land covered by the wells their treated is Rs. 902/- acres:—

Takkávi granted since 1862.

Tahsil.	Amount of takkávi.	No. of wells.	Average amount.
Ballabgarh ...	5,425	20	271 4 0
Delhi ...	7,470	61	122 8 0
Sunipat ...	2,200	22	100 0 0
Total ...	15,095	103	146 9 0

* Some details of takkávi granted since 1862 may be noted also here.

Statement showing revenue deferred on account of protective leases on wells in the Delhi District.

N. B.—THE NUMBER AT THE TOP SHOWS THE *yearly* AMOUNT COVERED BY THE PROTECTIVE LEASES WHICH RUN FOR THE PARTICULAR NUMBER OF YEARS DENOTED IN THE COLUMN; THE NUMBER AT THE BOTTOM IS THAT OF THE WELLS ON WHICH THIS YEARLY AMOUNT IS SECURED; AND THE CENTRAL FIGURES ARE THE *total* AMOUNT REMITTED ON THESE WELLS.

NAME OF TAHSIL.	For 1 year.	2 "	3 "	4 "	5 "	6 "	7 "	8 "	9 "	10 "	11 "	12 "	13 "	14 "	15 "	16 "	17 "	18 "	19 "	20 "	Total.
DELHI	...	...	37	31	59	45	35	6	31	63	83	185	71	22	104	...	...	...	...	...	772
	...	...	111	124	295	270	245	48	279	630	913	2,220	923	308	1,560	...	...	...	...	...	7,926
	...	...	2	1	2	2	1	1	1	6	5	8	3	2	2	...	...	...	...	...	36
SUNIPAT...	...	...	...	31	...	...	49	26	15	55	56	...	26	44	59	...	36	...	...	...	397
	...	...	...	124	...	...	343	208	135	550	616	...	338	616	885	...	612	...	...	...	4,427
	...	...	...	1	...	...	2	1	1	1	2	...	1	1	2	...	1	...	...	...	13
BALLABGARH...	...	...	42	...	...	...	30	182	23	66	36	132	40	138	26	55	18	...	...	...	788
	...	...	126	...	...	...	210	1,456	207	660	396	1,584	520	1,932	390	880	306	...	...	...	8,667
	...	...	3	...	...	...	3	5	2	5	2	8	3	11	3	3	1	...	...	...	49
TOTAL ...	...	...	79	62	59	45	114	214	69	184	175	317	137	204	189	55	54	...	...	...	1,957
	...	...	237	248	295	270	798	1,712	621	1,840	1,925	3,804	1,781	2,856	2,835	880	918	...	...	...	21,020
	...	...	5	2	2	2	6	7	4	12	9	16	7	14	7	3	2	...	...	...	98