

## CHAPTER XIII.

### ON ASSESSMENT AND THE METHOD OF CALCULATING SOIL RATES.

THE entry of the soil classes on the khasra was, it has already been said, the work of the girdawars, who filled in the entries of occupancy and proprietorship, field by field, on the spot. Before allowing them to begin this important work Mr. Crosthwaite explained to them how they were to distinguish between different soils, and saw them do a certain area under his own immediate supervision. As far as possible, names commonly recognised amongst the people were adopted, but merely local names, which might convey a wrong idea to a person new to the particular locality, were recorded. For instance, *dumat*, *matyár*, and *bhár* are universally known, and were therefore at once adopted. *Kallar*, signifying land injured by reh, being also understood all over the district (though not perhaps in other parts of the province), was also approved. On the other hand, words like *jháda* for inferior clay, *kamp* for alluvial soil, *karri mattí* and *gilli mattí* for different kinds of *matyár*, and other similar terms were rejected as liable to be misunderstood and to be misstated by the girdawars.

2. This was, I think, correct. It gave rise, however, at once to a difficulty in finding sub-divisions enough in the primary names to express at all accurately the different qualities of soil. The more obvious, such as 1st and 2nd, superior, average, and inferior, *kallar* and *tarái* (for lowlying land along a river) were soon used up, and did not suffice for the distinctions required. Classification according to proximity to the site is not generally recognised in this district, and such terms as '*mánjha*' and '*hár*' would not be understood. Nor would they be at all suitable definitions, for except in the few towns and villages with large sites, or in those with *bághwán* tenants, even the *gauhán* land is not distinguished by any distinct rate. The reason for this lies,—first in the inferior cultivation of all but the *bághwáns*, who are the only class of cultivators who steadily go in for what may be called garden cultivation; second, in the necessity of distributing the manure over the cane growing land, which varies from year to year, and in the consequent want of manure for *gauhán* cultivation; and last, but not least, in the prevalence of the *batái* system, under which the zamindar had no occasion to put on an extra rate, for at the same rate he naturally got more if the produce was more. Both Mr. Crosthwaite and Mr. Smeaton only made a separate *gauhán* class where they found there was some clearly recognised distinction drawn between such land and the rest of the village. As a matter of fact, *gauhán* land is really almost invariably more valuable than other land in the village, and I do not suppose that either Mr. Smeaton or Mr. Crosthwaite overlooked this. They went on what is, I think, a correct principle in assessing revenue,—that of following the broad lines of district customs on such points; they found that *gauhán* land was not, as a rule, clearly separated from the rest of the village; and they therefore followed the district custom, and, looking on the good *gauhán* as counterbalancing the bad land in other places; did not make separate rates on account of purely artificial distinctions. It was therefore clearly impossible to introduce terms like *mánjha* and *hár*, and irrigated and unirrigated were for similar reasons objectionable, as I shall show a little further on.

3. In order, therefore, to make more different shades of quality, Mr. Crosthwaite adopted the plan of classifying the villages of the pargana he was dealing with, and then working out rates for each sub-division of his primary soils within each class. For instance, in a first class village he would perhaps estimate—

				Rs.	a.	p.
Dumat first at ...	{	Superior ...	...	5	10	0
		Inferior ...	...	4	13	0
While in a third class he would put the same sub-divisions at,	{	Superior ...	...	4	4	0
		Inferior ...	...	3	12	0

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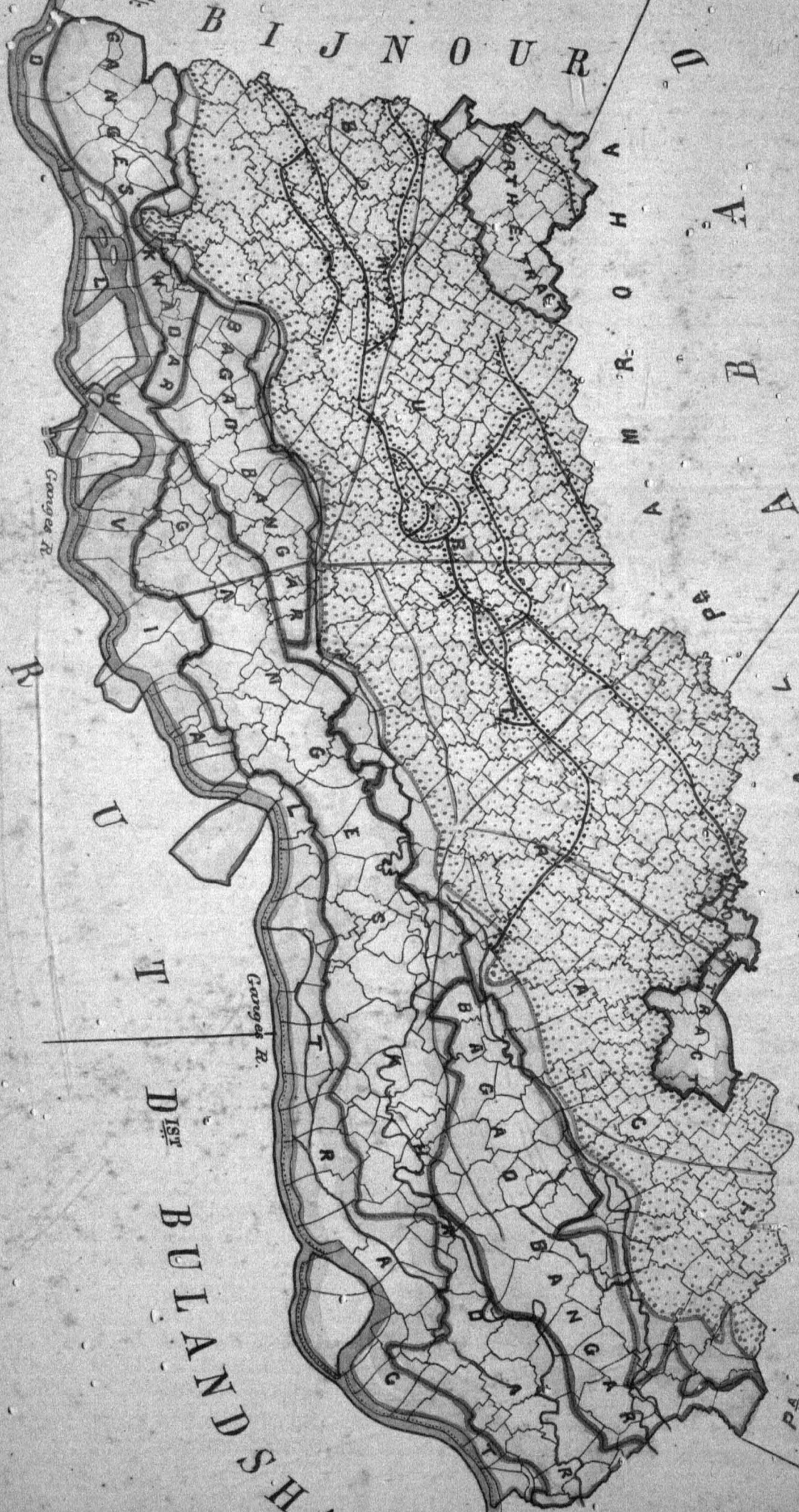
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In thus classifying his villages, Mr. Crosthwaite went more by his own opinion of the general capabilities of the villages than either by existing rents or local position.

4. Mr. Smeaton altered the system, and in my opinion very much improved on it, by dividing the pargana into tracts according to physical characteristics. The map given at the beginning of the book shows these tracts, and to complete the system I have to the best of my ability marked them out in Morádábád and Thákurdwára. These, it must, however, be clearly understood, are utterly different from Mr. Crosthwaite's village classes, which are according to quality, not position. As I think Mr. Smeaton's procedure is far the best I have yet seen, I here give a map of one pargana, Hasanpur, on a larger scale than the district map. It will be seen that there are seven distinct tracts. Of these two may be set aside as unimportant. The remaining five are—

The bhúr.

The jhíl.

The bángar.

The khádir.

The alluvial tract.

Each of these differs widely from each other, and consequently what is first class dúma on the bhúr differs materially from the soil called by the same name in the khadir. The classification by tracts enabled us, without altering our primary names, to distinguish clearly between them, and to fix different rates as they actually required. In fact, the classification multiplied every one of our sub-divisions by five, and, being according to physical differences clearly marked and locally recognised, was much more satisfactory than an arbitrary arrangement, by which villages locally quite distinct are brought together on an estimate of quality. If this system is not generally known and followed, I think it deserves to be, and as it was not mine, I hope I may say so here.

5. To proceed—having got the soil classes recorded on the khasra and khatiauni slips, and the total for the village and mahál worked out from the safahwár, the work has reached the stage when the soil rate must be determined and applied to the areas thus ascertained. This is undoubtedly the most difficult task of all, understanding by difficult not so much laborious, as delicate and likely to go wrong unless done with great judgment and with real sound knowledge of the different facts on which the rent rate must be based. In this district we were met almost at once by a serious difficulty. This was the prevalence of what I will call generally "the batái system," setting aside for the time the points before noted about amaldári and kankút. Under this the tenants' rent, instead of being stated in cash, is stated at a certain share in the produce, usually one-third, two-fifths, or half, an additional fraction being also usually taken from them in the shape of 'kharch,' originally a very minute charge supposed to remunerate the zamindar for his expenses in weighing out the produce, and generally in taking his share, but since run up in many cases to an exorbitant amount.

6. As Government does not and cannot take its revenue in the same way, but by a fixed cash payment, the problem at once presented is how to calculate the rate at which this ought to fall, and as far as I can gather Mr. Crosthwaite's system was as follows. In pargana Morádábád, with which he commenced, there was fortunately a large area under cash. The rents on this rarely varied according to different classes, but were all round rates at so much a kucha bígha. Mr. Crosthwaite satisfied himself that these were correctly recorded in the khatiauni, and then by comparing the rentals of different villages and different holdings, and at the same time comparing the particulars of the soils on which they were paid, he worked out rough average soil rates. These he then proceeded to test further by working out for a number of different holdings rentals

at these assumed rates and comparing the result with the rentals actually paid. He then proceeded to commute rents from kind to cash as follows :—

“From the rent-rates ascertained as above I came to a conclusion as to the prevailing rates of land, and determined roughly on my rates. I then took up the commutation cases and worked them in the following way :—Before the day fixed for the case I had a rent-roll prepared, showing what each tenant ought, in my opinion, to pay. This I compared with the recorded rentals, past and present, and with the revenue now paid, and brought any other information in my possession to bear on it. Being satisfied of the correctness of the rates, on the parties appearing, the rent-roll was explained and proposed to them, and after a good deal of bargaining and haggling, especially over the rates of padhans and other favored tenants, the rents were accepted, either as they were, or in a modified form.

“I was satisfied after these cases had been done that I had obtained fair rates, rather low, if anything; low, that is, compared to the high profits enjoyed by the zamindars, who have hitherto received their rents in kind, but not low in relation to existing cash rents. It must be remembered that if too high rents are fixed on first commuting, the tenants will surely break down, and we incur all the odium of ruining them. Besides, I am convinced that under the batái system the cultivators are not getting a fair return for their labor and capital, and are in a most abject state of poverty; while the zamindars are getting far more than their fair share of the produce.”

After this his course was clear; he had fairly accurate soil rates, and he raised or lowered them to suit the different classes into which he divided his villages. In Thákurdwára, where the batái system prevailed, Mr. Crosthwaite had his Morádábád rates to guide him. He followed exactly the same system of classification, and he applied the Morádábád rates with such modifications as his own experience suggested. He says himself :—

“The very large area of batái renders it quite impossible to give proof of my rent-rates. And here I think I may say that the tendency to exact actual proof of the assumed rates, which is a growing tendency, is a dangerous one. Such proof can only be obtained from the recorded rentals, and as the recorded rentals are well known to be more or less fictitious the proof is really worth nothing.

7. Mr. Smeaton, much in the same way as Mr. Crosthwaite, began with a pargana (Bilári) in which cash rents were prevalent. He was exceedingly careful in his inspection of the soil classes as marked off by the subordinate establishment, and as his description of his work is brief and pertinent I give it in full :—

“The mode of inspection followed was laborious, but it was, I venture to think, thorough. During the season immediately before inspection of the pargana four trained supervisors or sadr munsarims were employed with a large staff, in preparing the khasras and skeleton khatiaunis. Each sadr munsarim had under him four or five munsarims. These munsarims, as they went from field to field recording the facts of ownership and occupancy, had also to mark on the map with a pencil line the blocks of different soils as they occurred. The sadr munsarims then went over every block, line by line, altering as they found necessary, closing in the separate blocks with coloured lines, and writing upon each the name of its soil. The sadr munsarim was the person responsible for the correctness of his demarcation. This process, however, was only preliminary. In the following season I went over every village in person. Taking the map in my hand with the sadr munsarim's colored lines upon it, I walked round and through every separate soil chak, altering the lines where I thought the demarcation wrong. I may safely say that when my inspection of a village was completed there was not a single field within it which had escaped me. Immediately on returning after inspection I had the khasra soil column filled in according to my final classi-

fication, and the village soil totals were then made up. During inspection I had the whole of the tenants, and many, at any rate, of the zamindars, always with me. This I insisted upon most rigorously. I was able then to ascertain a good deal of the past history of the village, and I compared facts thus discovered with the statistics furnished by the patwari and kanungo, which I had entered in a notebook by me. Prevalent rents, the general social condition of the villagers, the favorite crops, the relations between landlord and tenants, all came under my notice as I conversed with the people, and after I had thus obtained what seemed a faithful picture taken on the spot, I transferred it to my notebook. A clerk accompanied me into every village, and where any information too detailed for my own notebook was forthcoming, I made him put it down in writing on the spot for me.

"Going through this laborious process in every village, it was not hard for me to discover what were the prevalent rent standards. No doubt one frequently got bewildered among the perpetual variations; but as the inspection progressed these explained themselves, and I was generally able to say what were the upper and lower limits between which the rates really oscillated.

"These soil-rates were fixed by me after personal enquiries in every village of the pargana. There was, however, nothing haphazard in the process. At first, of course, the heap of rates which one had to take note of seemed quite chaotic. Gradually as the inspected area widened, abnormally high or low rates marked themselves off and were eliminated. This eliminating process went on until, at the end of inspection, certain rates had, so to speak, become crystallized in my mind. These are the soil-rates now proposed.

"It is by this personal enquiry alone that the relative letting values of soils can be ascertained. The figures of soil-rates obtained in this way should not often differ materially from those deduced from rent-rolls and soil statements; but in the event of any material difference appearing, I should adhere to the figures obtained from my own enquiries. The reason is plain. During my personal inspection I am able to throw out of consideration exceptionally high or low rates as they come before me. The merely arithmetical process, on the other hand, involves the mingling up of all rates without discrimination, and runs the risk of bringing out results arithmetically true, but vitiated for assessment purposes by the preponderance in the dividend of rates either abnormally high or low."

In the parganas he subsequently assessed Mr. Smeaton had always the sanctioned rates of the adjoining parganas to assist him, and even therefore in Hasanpur, which was almost entirely under batái, the process of working out the soil rates was thus rendered comparatively easy.

8. In the small area which I personally assessed I followed exactly the same procedure as Mr. Smeaton, and my soil-rates were based in great measure on a careful enquiry into the quality of the land I assessed as compared with the land of the bordering portion of pargana Sambhal, for which Mr. Smeaton's rates had already been sanctioned. In the tracts where I could not use these rates, I was fortunate in having cash-paying areas large enough to draw deductions of some value from, and from these, and a comparison with rates already sanctioned for somewhat similar lands elsewhere, I was able to make out fairly accurate soil rates.

9. In this report I do not think it would be of advantage to give all the different rates adopted in all the different classes and tracts. Such details would fill several pages, and can always be found in the pargana rent-rate reports. I therefore give *average* rates for each primary soil in each pargana, excluding special classes like gauhan and suburban, which would give a wrong impression of the average rate. But I hope it will be distinctly understood that this is an *average only*, and not a soil-rate

adopted in actual assessment; as also that it will be borne in mind that what is called dumat first in one part of the district, say Thakurdwara, differs considerably from what is called by the same name in another part, like Hasanpur:—

*Class of soil, estimated area (cultivated), and average rate.*

Pargana.	Dumat I.		Dumat II.		Matyār I.		Matyār II.		Bhūr I.		Bhūr II.	
	Area.	Average rate.	Area.	Rate.	Area.	Rate.	Area.	Rate.	Area.	Rate.	Area.	Rate.
		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
Morādābād ...	53,830	4 14 3	23,240	3 10 6	23,472	4 6 2	10,527	3 0 6	8,173	2 6 0	683	1 9 9
Thākurdwāra ...	36,487	4 8 0	17,218	3 6 3	13,094	4 7 3	28,645	3 2 0	3,572	2 4 0	377	1 7 6
Bilāri ...	73,287	5 3 0	49,216	3 15 6	6,787	4 6 9	4,950	3 3 0	25,136	2 12 10	4,847	1 9 8
Sambhal ...	64,787	4 12 9	82,752	3 6 0	10,768	4 7 0	1,959	2 15 6	52,649	1 15 9	13,610	1 3 0
Amroha ...	59,298	4 8 1	57,316	3 3 7	8,046	4 7 6	13,594	2 12 10	25,512	1 15 11	5,114	1 3 2
Hasanpur ...	40,017	4 1 0	45,821	2 7 0	8,056	3 9 0	5,238	1 13 6	46,121	1 7 6	20,747	0 12 10
Total ...	327,706	4 11 7	275,563	3 5 2	70,233	4 7 1	69,313	2 15 1	1,61,163	1 15 9	45,378	1 1 0

The areas include revenue-free land, the whole total agreeing with the total cultivation of the district already shown in Chapter I.

10. At the average district rates, which I give in the last line, the results would be as shown below:—

Soil.				Area.	Rate.	Result.
					Rs. a. p.	Rs.
Dumat, 1st	...	...	...	327,706	4 11 7	15,48,069
Dumat, 2nd	...	...	...	275,563	3 5 2	9,04,715
Matyār, 1st	...	...	...	70,233	4 7 1	3,12,023
Matyār, 2nd	...	...	...	69,313	2 15 1	2,03,968
Bhūr, 1st	...	...	...	161,163	1 15 9	3,18,760
Bhūr, 2nd	...	...	...	45,378	1 1 0	48,214
Total				949,356	...	33,35,749

The result of the average pargana soil rates and of the detailed soil rates actually employed are as follows:—

Pargana.				Deducted rental at average pargana rates shown above.	Deducted rental at the detailed rates as shown in the rent-rate reports (including muafi).
				Rs.	Rs.
Morādābād	...	...	...	5,25,483	5,25,670
Thākurdwāra	...	...	...	3,78,986	3,76,100
Bilāri	...	...	...	6,99,550	6,98,000
Sambhal	...	...	...	7,54,480	7,00,000
Amroha	...	...	...	5,83,002	5,82,780
Hasanpur	...	...	...	3,95,473	3,88,200
Total				33,34,974	33,30,220

so that the difference between the amount worked out by the district average and the detailed rates actually used in assessment is only Rs. 5,529 on a rental of over 33 lacs.

This is, I think, proof positive that the average rates assumed are fairly correct ones, though of course it would hardly ever do to apply them to a particular piece of land.

11. The following statement gives the recorded rentals of the parganas for ten years from 1270 to 1279 fasli. I should have preferred to take more recent years, but as work began in Morādābād in 1280 fasli, and the figures for the district must be throughout of the same year to prevent confusion, I cannot do so:—

Statement showing ten years' nikāsis from 1270 to 1279 fasli of parganas in Morādābād district.

Tahsil.	1270f.	1271f.	1272f.	1273f.	1274f.	1275f.	1276f.	1277f.	1278f.	1279f.	Total of ten years.	Average of ten years.
	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
Morādābād ...	3,47,975 10 6	3,74,478 6 6	4,04,320 4 6	4,14,419 9 5	4,11,824 5 11	4,33,675 14 6	4,07,442 4 8	4,71,253 0 3	4,30,974 13 1	4,29,354 10 1	41,25,718 15 5	4,12,571 14 4
Bilāri ...	5,02,313 9 6	5,09,856 15 6	5,20,415 12 0	5,28,900 4 6	5,37,264 1 9	5,52,921 12 9	5,52,220 3 3	5,67,803 5 5	5,68,750 10 5	5,71,230 12 10	54,11,677 7 11	5,41,167 12 0
Thākurdwāra...	2,41,463 14 6	2,75,818 6 9	2,78,111 2 3	3,11,745 0 3	3,04,594 12 9	3,32,006 1 6	2,60,786 7 0	3,81,967 14 3	3,23,145 8 11	3,09,390 14 11	30,19,080 3 1	3,01,903 0 4
Sambhal ...	5,62,655 13 0	5,73,236 7 6	5,62,457 3 5	5,75,497 7 5	5,73,780 12 5	5,98,010 12 0	5,62,708 1 11	5,76,560 8 10	6,27,959 4 0	6,33,945 14 0	58,46,812 4 6	5,84,681 3 8
Amroha ...	3,99,220 10 0	4,15,315 9 6	4,30,695 11 3	4,41,658 6 0	4,46,061 7 9	4,75,988 10 6	3,89,961 4 6	5,63,030 2 9	4,46,184 13 9	4,71,243 8 0	44,79,360 4 0	4,47,936 0 5
Hasanpur ...	3,71,059 11 0	3,62,078 5 0	3,61,149 7 0	3,87,075 8 6	3,95,514 9 0	4,10,339 6 9	3,72,166 7 9	5,27,914 8 3	4,04,516 14 3	4,09,854 12 3	40,01,669 9 8	4,00,166 15 4
Total ...	24,24,689 4 6	25,10,784 2 9	25,57,149 8 5	26,59,296 4 1	26,69,040 1 7	28,02,942 10 0	25,45,284 13 1	30,88,529 7 9	28,01,532 0 5	28,25,020 8 1	2,64,84,266 12 3	26,48,426 14 1

12. Adding to the deduced rentals the amounts calculated for sayar and waste the pargana rentals worked out by the settlement officers compare with the average of the ten years, recorded rentals as follows:—

Pargana.	Total deduced rental including muafi.	Average recorded.	Difference in latter.	
			More.	Less.
	Rs.	Rs.		Rs.
Morádábád ... ..	*5,62,995	4,12,572	...	1,49,723
Bilári ... ..	†3,86,080	3,01,903	...	84,177
Thákurdwára ... ..	6,98,130	5,41,168	...	1,56,962
Sambhal ... ..	7,60,000	5,84,681	...	1,75,319
Amroha ... ..	5,82,250	4,47,936	...	1,34,314
Hasanpur ... ..	†4,04,200	4,00,167	...	4,033
Total ... ..	33,92,955	26,88,427	...	7,04,528

The reasons for so large a difference in Morádábád were, I believe, as follows:—

- (1.) In some villages the recorded rentals were understated.
- (2.) Even if fairly accurate, they required raising in most cases to allow for sir, privileged holdings, and rent-free lands, for which Mr. Crosthwaite seems to consider about Rs. 50,000 should be added.
- (3.) Mr. Crosthwaite allowed over Rs. 36,000 for the waste lands.
- (4.) The average is brought down by the earlier years in which the rise of prices had not been fully felt, and in which the rental is therefore lower than it should be during the present time of settlement.

In Thákurdwára it is explained by the first, second and fourth reasons. Mr. Crosthwaite does not seem to have calculated any general rate for the waste, though of course he made some allowance for it in detailed assessments when very extensive or otherwise valuable.

In Bilári, where cash rates prevail, the 1st cause was not of importance; but there was another which had almost exactly the same effect, and this was that in a large number of villages enhancement had not taken place, the old rates imposed thirty years back being still current, though notoriously inadequate. For the probable enhancement in such cases immediately after settlement Mr. Smeaton estimated about Rs. 78,000.

The second cause had not much effect, Mr. Smeaton seems to have calculated on less than Rs. 10,000 for such corrections.

The third was almost altogether inoperative, but, on the other hand, the fourth was very strongly felt, and accounts for the remainder of the difference.

In Sambhal Mr. Smeaton made no definite allowance for the waste, the increase in cultivation being in itself sufficient to ensure a considerable increase of revenue. To some extent the delay in enhancing cash rents affected the rental, as in Bilári; but the main causes of the difference between the estimate and the actual were—

1st.—The large area held as sir or at privileged rents, and the very high rates adopted for the estimate in the city and suburban lands in which a considerable portion of this area lay. Mr. Smeaton appears to have estimated the corrected rental at Rs. 6,68,500 on the khalsa alone. The total recorded rental of the whole pargana was Rs. 6,33,946, and deducting the Rs. 33,946 as the rental of the muafi lands, which is not excessive, it is plain that Mr. Smeaton allowed quite Rs. 68,500 for the result of the correction.

	Rs.
* Waste ... ..	36,625
† Sale of wood and grazing ... ..	998
‡ Sewal from sale of thatch grass, bhuils, and jhao, and from grazing fees ... ..	16,000

2nd.—The fourth cause already given for Morádábád, the difference between the rental at the beginning and end of the ten years' period being very considerable.

For the difference in Amroha the chief reasons are, first, the understating of the rental, partly due to inaccurate information given by the landlord to the patwári, but chiefly to the fraudulent malversation of a considerable portion by the numerous agents employed. Mr. Smeaton puts the latter at a value of nearly a lakh of rupees, and estimates the amount taken from the tenants at more than that sum above the recorded rentals.

The second and fourth causes have also had something to say to the result, though not so much as in most of the other parganas. The area of sir is very small, and the tenants used to be rack-rented to an extent which was to some extent checked just before settlement, so that, though the value of produce rose, the rental did not rise in the same proportion.

In Hassanpur the amount of difference is so small that the only explanation needed is how the two come to agree so well, and I believe the answer must be almost entirely by pure chance. In the first place this average rental is below the rental obtaining at the time we assessed, the average recorded between 1280 and 1285 being considerably above that between 1270 and 1279. Then I do not believe much in the accuracy of the recorded rentals. My own experience goes to convince me that they were most frequently understated by the patwári to please the zamindar, and occasionally overstated to raise his own rassúm. It is therefore mere accident that the fluctuations thus caused should balance each other in such proportions as to produce a result almost identical with our estimate.

When corrected the rental average amounts to about 4½ lacs, very nearly identical with our estimate; but, as Mr. Smeaton says:—

“From experience of the way patwáris' records are prepared, I imagine that though they may furnish a fair index of progress or retrogression, that is, whether a village is better or worse this year than last, they cannot be trusted to furnish accurate statistics of the assets in any one year.”

I can also add from actual experience that I am sure our estimate is below what the zamindars, or perhaps I should say their agents, have been receiving in batái, because under that system the zamindars have been receiving more, and the tenants less, than a fair share of the produce. If the result of our rates was not below the actual receipts, I do not believe that there would have been so much repugnance to commutation, though no doubt there would have been a good deal on account of the loss of power which the agents especially prize so dearly. While, therefore, I think the coincidence of our rate result with the recorded rental may fairly be used as an argument against any of the zamindars who understated the latter with a view to settlement, I desire clearly to record that I do not think it is worth a pin's head as really proving that our rates agree exactly with what is taken. I should, on the contrary, be very sorry to believe so, for if it were so I should conclude our rates must have been too high, the depressed condition of the tenants clearly showing that too much has hitherto been taken from them. I believe that here, as in Amroha, a large amount may be added to the recorded nikási for the income intercepted by managers and underlings, add for the varying and illegal cesses or benevolences levied from the tenants by the landlords themselves (but not recorded in the nikásis) before the real total of the tenants' payments is arrived at.

13. I must say I am myself rather surprised to find in all the parganas the result of our estimate above the average recorded rentals. I have explained the reasons as far as I can, and I wish now especially to insist on one of them—the rise on the rentals during the past eighteen years. To get anything like a fair rental for 1285

fasli, it is certain that a very great rise must be made on 1270 and a considerable one on the average between 1270 and 1279. Not only has cultivation extended, but the rise of prices, already mentioned in Chapter VI., has necessarily had a considerable effect in raising rents also. If any one should believe, however, that our rates are proved too high by the comparison now made, I will ask him to consider the fact that for one application to commute presented by the zamindar we have had at least fifty given in by the tenants, and that the very first objection made by the zamindars in these cases almost always is that our rates are too low.

14. In the above calculations I have dealt with the whole of the cultivated area. It is now necessary to notice the large extent of revenue-free land within it and make an allowance for this. The allowance is calculated at the same rates as those on which the deduced rentals above given were made out, and the result of deducting it in each case is as follows :—

Pargana.					Deduced rental.	Decrease for muâfi.	Left on khalsa.
					Rs.	Rs.	Rs.
Morádábád	...	...	...	...	5,62,295	27,000	5,35,295
Thákurdwára	...	...	...	...	3,86,080	26,440	3,59,640
Bilári	...	...	...	...	6,98,130	30,100	6,68,030
Sambhal	...	...	...	...	7,60,000	40,200	7,19,800
Amroha	...	...	...	...	5,82,250	3,56,785	2,25,465
Hassanpur	...	...	...	...	4,04,200	30,400	3,64,800
District Total					33,92,955	5,19,925	28,73,030

## CHAPTER XIV.

### RESULTS OF ACTUAL ASSESSMENTS.

At the end of the last chapter I showed the rentals resulting on the khalsa land from the application of the soil rates after adding an allowance for siwái in three parganas where it was especially calculated on by the Settlement Officer and in pargana Morádábád, also adding an allowance for waste lands.

2. The result of a detailed assessment ought not to vary *very much* from half the rental thus obtained. Slight variations either above or below the rates have often to be made in individual cases, but the net result should not be far out if the rates worked on are really suitable. If we find it much above the half the rental obtained as before shown, we may be sure that the rates were too lenient, and that in actually applying them the Settlement Officer found he was not justified in going down to their result, and we may presume just the opposite if the result is much below.

3. In making the comparison between the actual results and half the estimate in this district, I take for the former the jama as standing in 1287 fasli, the year from which the last assessment declared (those of pargana Hasanpur) came into force. I cannot take into account changes in subsequent years. In Hassanpur, for instance, some increase may be made on certain maháls which were assessed at rather below full half assets, but as I cannot now tell what will be the exact amount, and as there will always be some fluctuations every year owing to various causes, I cannot take anything beyond 1287 as my basis. With such large sums as we have to consider now changes of a few hundred rupees are in fact of little consequence, though I consider it right to note clearly on what basis I proceed.

4. The following statement shows the result of the comparison:—

Pargana.	Half the deduced rental.	Jama fixed.	Difference.	
			More.	Less.
	Rs.	Rs.	Rs.	Rs.
Morádábád ... ..	2,67,648	2,59,738	...	7,910
Bilári ... ..	3,34,015	3,38,969	4,954	...
Thákurdwára ... ..	1,79,820	1,82,075	2,255	...
Sambhal ... ..	3,59,900	3,51,016	...	8,884
Amroha ... ..	1,12,732	1,15,827	3,095	...
Hasanpur ... ..	1,82,400	1,83,063	663	...
Total ... ..	14,36,515	14,30,688	...	5,827

Considering the sums dealt with, I really think the differences are too small to need much comment.

5. In considering the result of the new assessment in comparison with the former jama it is necessary to note what I before mentioned about the changes in the administration divisions made in 1844. By the arrangement then made, not only were a large number of small parganas amalgamated, so as to form the six now standing, but a good many villages were brought in from Bijnor. It is, therefore, quite impossible to make any comparison with the jama of the former Morádábád district as it stood at the time of the last settlement. The comparison I show is merely of the former and present jamas of the villages now comprised in each pargana, and of course my former jama so shown will not, as a rule, agree with the former jamas mentioned in Mr. Money's Settlement Reports, since what he would, for instance, call pargana Morádábád is utterly different from what I mean by the term now.

6. Premising this, I now show the result of the new jamas:—

*Comparison between results of the former and of the present settlement, excluding nazarana.*

Pargana.	No. and date of Government order sanctioning.	Jama of the last settlement.		Jama of the new settlement.	Increase.	
		As first assessed.	As current when the new settlement came into force.		On column 3.	On column 4.
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Morādābād ...	1694A of 15th Sep., 1876 ...	1,81,480	2,02,254	*2,59,730	78,258	57,484
Thākurdwāra ...	2947A., 19th Dec., 1877 ...	1,80,800	1,81,962	*1,82,075	1,275	113
Bilāri ...	426A., 13th Feb., 1878 ...	2,31,968	2,47,030	*3,38,969	1,07,001	91,939
Sambhal ...	12A., 2nd January, 1880 ...	2,67,130	2,87,925	3,51,016	83,886	63,091
Amroha ...	97A., 19th January, 1880 ...	1,09,103	1,00,447	1,15,827	6,724	15,380
Hassanpur ...	Not yet received ...	1,80,933	1,81,850	1,83,063	2,130	1,213
	Total ...	11,51,414	12,01,468	14,30,688	2,79,274	2,29,220

\* The new jamas include the following sums which are remitted for the life of certain grantees, being half or one-fourth of the assessment of mahāls they hold:—

	Rs.	a.	p.
Morādābād ...	507	8	0
Thākurdwāra ...	611	0	0
Bilāri ...	5,905	0	0

The reasons for the difference between the jama of the last settlement as declared and as current when the new settlement began have been given in Chapter IX. Taking it as current the increase resulting from the present revision is rather over 2½ lakhs of rupees, and this has been obtained without any severity. Indeed, on the whole, I think the assessment is if anything light, especially in the west of the district, where the enormous area of the bhūr tract rendered it necessary to be lenient in order to allow for fluctuations of season.

The reasons for the increase obtained lie—

- (1) in the large extension of cultivation which has really taken place;
- (2) in the more accurate record of the cultivated area;
- (3) in the rise of prices and in the increased value of land.

7. As far as I can ascertain, the past and present areas stand as below. I cannot pretend to exact accuracy, but they are at least approximately correct:—

1	2	3	4	5	6	7
Settlement.	Area out of assessment.		Culturable area.		Cultivated.	Total.
	Revenue free.	Barren.	Old waste and groves.	New fallow.		
	Acres.	Acres.	Acres.	Acres.		
Past ...	284,924	211,350	321,764	54,813	376,577	1,446,033
Present ...	237,273	169,596	255,004	78,138	793,991	1,474,002
Increase ...	...	...	...	23,325	220,808	27,969
Decrease ...	47,651	101,754	66,760	...	...	...

It must be noted, however, that in the present area are included about 19,000 acres which were transferred to the Meerut and Bulandshahr side of the Ganges in 1287 fasli. Such land is constantly shifting, and I have not therefore considered it necessary to alter the areas all through on account of the change.

8. From what I have before stated in chapter IX. it will, I hope, be clear that a considerable portion of the increase shown under cultivation is only a paper one,

being brought out by the more accurate record of the cultivated area; and although it is true that *in theory* the area kept out of the records at last settlement should strictly now form a basis for an increased assessment just as much as the really new cultivation, yet *in practice* it cannot do so. In practice the assessments of the last settlement did not rest so much on the statistics of cultivation recorded in the settlement khasras as on the estimates formed by the kanungos and the Settlement Officer, which were based principally on the existing rentals and the information obtained as to the pressure of the jama under revision. The cultivation then existing therefore, whether recorded or not, had some effect on the assessment, and the increase in the jama of the present settlement cannot, therefore, be expected to be in the proportion of the nominal increase in cultivation, even setting aside other reasons than that above given. Further, part of the cultivation now shown is included in the revenue-free area of the past settlement. The resumptions were all made with one or two trifling exceptions during the course of the past settlement, and do not therefore account for any part of the present increase in revenue; but the cultivated land which forms the greater part of the resumed area has been transferred to this column and must be set off against the increase under it.

9. Altogether, I think the real increase in cultivation may be estimated at about 25 per cent. The increase in the jama is only about 19 per cent., and with the much increased value of produce this at first sight seems inadequate. It must, however, be remembered that not only is the present assessment based on the scale of one-half instead of two-thirds of the estimated assets, but that the new cultivation is, as a rule, inferior in quality to the old. The reduction in the scale of assessment, in fact, outweighs the increase in cultivation considered above, and it is chiefly the increased value of produce which has made room for the present enhancement. I showed in Chapter VI. that there were grounds for believing that most of the ordinary agricultural produce had increased nearly 60 per cent. in value, and though where cash rents prevail they have not risen quite so much, I believe that 35 per cent. is not an excessive estimate for the rate at which they have increased, inclusive of enhancement made in the present settlement.

There has, thus, been room for a considerable enhancement, but it could not come up to anything near the increased value of produce. Part of the increased value must be cut off to meet the increased price of production apart from the land rent, and part is, I believe, due to the smaller yield obtained. The increase in cash rents is not, I think, much over 35 per cent., and this is, I think, a fair guide to what the actual increase in the income of the landlords has been. With no accurate statistics for comparison it is impossible to give any definite figures of what the decrease in the rate of the yield of the land has been, but I am convinced there has been a decrease; I cannot otherwise account for the recorded rentals between 1845 and 1865 being as high as they are. The prices then obtaining are fairly accurately known, and at those prices, with the existing rates of produce, the rentals could not have been paid year after year on the cultivated area which we know (with fair accuracy) to have existed. It is, moreover, commonly stated by natives as a thing too well known to be doubted, though, as usual, their ideas of the actual rates of decrease are exceedingly vague and often absurd. Considering the way the soil is cropped and the very small amount of manure or irrigation given to it, I think it is natural that there should be a decrease in the produce, and I think it is a matter which deserves attention.

In this report I have only to do with it as one of the causes why the increase in the revenue is not larger than it is, and I think it is a really efficient cause of considerable importance in this respect. Allowing for it, I think the 35 per cent. above mentioned is all the increase that could be looked for owing to the increased value of produce, and this is brought down by the proportion in which the reduction of the rate of assessment exceeds the increase which would otherwise have resulted from extended cultivation. The exact extent by which this reduces it is hard to give, but I do not

think that it can possibly be so great as to make the 19 per cent. of actual increase appear at all too high, and from personal knowledge I am inclined to believe that the assessments have been lenient, and that they ought to be realised with little difficulty.

10. The following statement shows the comparative incidence of the former and present revenues on the total assessable and cultivated areas. For the former jama as *current* just before the new settlement and for the present jama they are taken on the areas *as now ascertained*, but for the former jama as *declared* they are on the past areas shown in para. 7 :—

*Incidence of the revenue, excluding nazrana.*

Period.	On the total khalsa area per acre.	On the cul- turable khalsa per acre.	On the culti- vated khalsa area per acre.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Past settlement as declared ...	0 15 10	1 3 4	2 0 1
„ settlement as current just before the new assessment ...	0 15 3	1 1 4	2 3 6
Present settlement ...	1 2 5	1 4 9	1 13 4

The rise in the all round and culturable land rates since 1841 is accounted for by the much larger proportion which is now shown as under cultivation, whilst the decrease in that on cultivation taken alone is due to the reduced rate of assessment and to the more accurate system under which we worked. Mr. Money had, as a rule, to go above the results which his actually recorded area of cultivation would have given, and his rate of assessment thus seems high on it when taken alone.

11. I cannot think the present rates of assessment at all unduly low. In the adjoining districts of Budaun, Bareilly, and Bijnor, they seem to be as follows :—

District.	Assessable area.				Cultivated area.			
	Rs. a. p.				Rs. a. p.			
Budaun ...	0	14	3		1	3	9	
Bareilly ...	1	11	0		2	1	1	
Bijnor ...	1	3	11		1	15	2	
Morádábád ...	1	4	9		1	13	4	

The higher rates in Bareilly are explained by the smaller extent of waste (which necessarily runs up the rate on the assessable area) and by the smaller percentage of poor land in the cultivated area. In Morádábád there is still considerable waste, and in the west of the district there is a very large tract of poor bhúr land which brings down the rate most materially.

The rates on cultivation in the different parganas are as follows :—

	Rs. a. p.			
Morádábád ...	2	7	8	
Bilári ...	2	2	10	
Thákurdwára ...	1	15	9	
Amroha ...	1	15	9	
Sambhal ...	1	10	4	
Hassanpur ...	1	3	6	

The rent-rates for the different parganas have all been approved by the Board, and, as I have already shown, have been very closely kept to. Although, therefore, the difference between Hassanpur and Morádábád is at first sight surprising, I do not think there is anything in it which is not accounted for by the actual difference in the rental which the two tracts can at present afford to pay. The assessment of Hassanpur may perhaps have been rather lenient, but for the reasons above alluded to, which are given at length in the rent-rate report, I think this was a fault on the right side.

12. In conclusion, I may mention that the assessment of parganas Morádábád and Thákurdwára was made by Mr. Crosthwaite; that of Bilári, Sambhal, Amroha, and the greater portion of Hassanpur by Mr. Smeaton; and that of the remaining portion by me.

## CHAPTER XV.

### ON THE DISTRIBUTION OF THE ASSESSMENT AND THE INSTALMENTS FIXED FOR ITS COLLECTION.

THIS very important part of the work is frequently, but I think wrongly, made over entirely to the Deputy Collectors, who do it in a rule-of-thumb way which often works injustice, where the properties over which the distribution has to be made are small and numerous.

At first this course seems to have been followed to some extent here, the distribution in both Morádábád and Thákurdwára being made by the Deputy Collector immediately after the Settlement Officer had declared the jama of the mahál. The mischief caused by this procedure in some other districts was, however, to a large extent prevented by their being directed to proceed strictly on the basis of the soil rates, unless all the sharers expressly agreed to have the distribution made in some other manner. It has already been mentioned in Chapter XI. that the parchas of the khatiauni showed all the details of the soil classes, and that they were prepared separately for each holding in each separate property. All the parchas of each property were always kept together, and the totals of the soil classes of each property, with the result on each at sanctioned rates, were recorded on a statement called the kismwar, a translation of which was put in the general village statements now bound and filed in the Collector's office.

The Deputy Collector had, thus, something to go on, and where the properties were of considerable extent this was quite sufficient to ensure a fair distribution. Where, however, they were small, this was not enough. No classification of soils can practically be so minutely accurate; but that one field will be worth more than another bearing the same class name, and with very small properties, it therefore requires local knowledge to make a fair allowance for this fact. Mr. Smeaton, therefore, I think, very rightly took the distribution of jamas entirely into his own hands, and in pargana Sambhal introduced the plan of having a separate printed sheet known as the kismwar jamabandi, showing the *cultivated area* of each property under each class, with the result of the rent-rates, and giving space for remarks as to the reason for any divergence from this result in the assessment. I distributed the jamas of Amroha on the same system, but in Hassanpur I further had the details of the *whole* area of each plot recorded in the remark column of the kismwar jamabandi. This was obviously necessary in order to meet the peculiar circumstances of this pargana. Both Mr. Smeaton and I had already agreed that we could not take the actual cultivation of the year of inspection (1285 fasli) as the basis of our assessment, for more than a quarter of the usually cultivated area had become fallow, owing chiefly to the drought, but in some measure also to the settlement. We had also agreed that the fairest estimate to take was the average between the year of survey (1283) and that of inspection (1285,) plus 10 per cent., and the kismwar jamabandis were made out accordingly. By recording the details of the remaining area in the column of remarks, I could see at a glance how the waste stood in proportion to the cultivation and allow or not for it accordingly.

The entry also renders the kismwar jamabandis a complete record of the land attached to each property, and I wish it had been made on those for Amroha and Sambhal also, although it was not there absolutely necessary for a correct distribution of the jama, as it was in Hassanpur. In all three parganas the kismwar jamabandis are the primary evidence of the way in which the jama was distributed, and should be followed in preference to any of the vernacular records if any doubt ever arises.

3. The distribution was also entered in the vernacular khewats. In Sambhal, Amroha, and Hassanpur, we filed two khewats, and in these parganas it was, of course, entered in the later of the two, which was made out after carrying out all changes up to the commencement of the year from which the new jamas took effect. In the other parganas there was only one khewat, as the record-of-rights was all brought on up to that year.

4. Further, in the three parganas above named I had a list made out in vernacular, showing the amount of jama, mazrana, cess and fees due on every single property, as I found there were constant disputes on this subject.

In Morádábád, Thákurdwára, and Bilari, the cess and fees were, as far as I can ascertain, distributed by the tahsildars under the Collector's orders; but in these three parganas I have carried it out myself, as I found that the tahsildars made numerous mistakes over the muáfi plots.

Two copies of the list have been made—one of which I sent to the Collector, and the other to the tahsildar, for use in their offices. The lists should settle all doubts as to the amount due on any property as it existed at the time when the new jamas were declared. The keeping up of a correct register to agree with all the divisions and other alterations which will necessarily take place before the next settlement belongs to the Collector's establishment, and will no doubt be attended to. It should however, I think, be seen that the distribution of jama where properties are broken up is not allowed to become a mere formality done anyhow by the tahsíl establishment, as in this district, with the very large number of milks and other small properties, the distribution requires to be made intelligently on the basis of the actual relative value of the lands in the new properties.

5. The instalments in which the revenue is collected have necessarily varied a good deal over so large a tract as this district. Mr. Crosthwaite, when Settlement Officer here, called the attention of the Board to the ill effects of realizing the revenue at the same dates all over the country, and thereby not only in many cases forcing the zamindars to borrow or to press their tenants for rent before the harvest could be gathered, but also creating a scarcity of money by the great demand for it all over the country at the same time.

The Board took up the matter, and instalments have in consequence now been fixed which, in most cases, allow the people time to get in their crops before they are called on to pay. It has not, of course, been possible to make arrangements in such detail as to suit every single holding, but they broadly allow for the chief characteristics of each tract. The very large batai area which existed at the time the proposals were submitted rendered still later the naturally late date at which the harvest can be got ready for sale in this district, and the bulk of the kharif instalments were therefore fixed for December or January instead of, as before, for November. The large area of sugarcane also led to a special cane kist being imposed in March; though this was not in most cases put higher than two annas, because the cultivators receive a large portion of the value of the cane in advances before the crop is cut, and there is not, therefore, any necessity to postpone the payment of the whole of their cane rent till the juice is extracted. The rabi instalment has also been pushed up into June instead of being taken half in May as formerly, and this concession has been a really valuable one, as with a harvest which is often not all cut till the middle of April, and is not trodden out and winnowed till well into May, the collection of the rent in batai villages before the end of May was well nigh impossible. The accompanying statement shows the kistbandi of the district for 1287 fasli, and it will be seen from it that the bulk of the revenue is realized in January and June, the last month accounting for more than one-third of the whole revenue of the year.

This agrees with what I stated in Chapter V. as to the principal products of the district.

Wheat and barley are the most extensively grown crops in the district, and though cane yields a much larger return on the same area, its effect on the instalments is less, not only because its area is smaller, but also because the payments for it are spread over the year, a great portion being made in the shape of advances.

*Revenue instalments.*

Pargana.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Moradabad	...	0,470	69,724	...	16,437	...	...	1,03,107	2,59,738
Thakurdwara	...	48,021	50,245	...	23,750	...	...	60,058	1,82,075
Bilari	...	1,08,460	99,480	...	27,517	...	...	1,03,411	3,38,968
Sambhal	80,484	8,868	87,313	...	36,055	...	...	1,38,295	3,51,016
Amroha	...	27,303	28,393	...	8,007	...	...	52,124	1,15,827
Hassanpur	3,428	27,031	33,058	4,027	5,378	11,059	55,994	43,085	1,83,063
Total	83,912	2,90,153	3,68,314	4,027	1,17,144	11,059	55,994	5,00,081	14,30,687

In Sambhal and Hassanpur the November kist is due to the makka and early rice and to the special garden crops grown in the suburban circle of the former pargana. The special kists in February and April, in the Hassanpur pargana, are due to the siwai income from the sale of thatch grass and grazing fees in the khadar villages, and the May kist was fixed to suit villages in the khadar and other tracts which are affected by the inundation of the Ganges, and in which there is hardly any income in the kharif, so that almost the whole of the revenue had to be collected in the rabi.

## CHAPTER XVI.

### ON THE MUÁFI AREA OF THE DISTRICT.

BESIDES the jama already shown, there is a demand of Rs. 25,582f or nazrána on muáfi villages. The origin of the payment as described by Mr. Smeaton was the present made to the amil to secure his good will. At first the offerings were probably not in money, but some amil having started the custom, it rapidly gained favour, and very soon the present became fixed at a recognised sum. In this form we found it, and, I think fairly, made it a regular charge for the benefit of Government. The chief objection to it was the unevenness with which it fell, the amount on some maháls being quite nominal, whilst in others it was large enough to be a considerable burthen, and in a few was even as heavy as the jama would have been if they have been revenue-paying. This inequality arose from the nature of the payment, the weaker and less fortunate muáfídar having to pay more than the strong and the favoured. It could not, however, be remedied consistently with our recognition\* of the rights of the muáfídar to hold free of any further payment than that of the sum which they had been in the habit of contributing, and the fixity of the demand rendered it more supportable even in the few cases where it was really at all heavy.

2. The origin and extent of the muáfi tenures in this district has already been referred to in this report, and, as shown in Chapter XIV., there has been a decrease of 47,651 acres in their area since last settlement. This is, however, not altogether a real decrease, a considerable portion of it is due to discrepancies in area, the former measurements of the muáfi lands having been very inaccurate indeed. Statements which have been prepared by a careful comparison of the former registers with those made out in the present settlement show the following areas as resumed:—

Confiscated for rebellion,	Assessed as not declared revenue-free by any com- petent authority.	Lapsing on death of muáfídar.	Total.
Acres.	Acres.	Acres.	Acres.
12,405	1,826	7,928	22,159

This total is decidedly too small, and the reason is that a considerable area which had been resumed owing to various causes before the mutiny was never shown in the former registers, which were prepared from information collected from the patwáris and kanúngos after the mutiny, in which the original registers were destroyed. Perhaps an estimate of 35,000 acres as the actual decrease in muáfi area since last settlement may be taken as approximately correct, the remaining 12,650 acres shown on paper being merely due to nominal discrepancies in area.

3. The, perhaps unavoidable, inaccuracy with which the areas were recorded after the mutiny did not affect the comparison shown in Chapter XIV., which is between the figures of the two settlements, but it made our work in ascertaining the areas which should be passed for record in the present registers extremely difficult in some cases. For instance, it was not at all unfrequently the case that a muáfi property which should according to the former record have been 1,000 kacha bighas in extent was found to be 1,500, and the question at once arose whether the apparent increase was simply due to an error in the former area or to some fraudulent inclusion of khálsa land. The very numerous cases in which the new area was much less than it ought to have been according to the former record showed clearly enough that it would not do to assume the accuracy of the entries in the former register and resume any increase found by the new survey. Government had also recognised this in orders passed in 1851, wherein they laid down that where the whole 20 biswas of a village had been declared revenue-free, it was obviously only fair to allow the muáfídar to have the benefit of any increase in the area as ascertained now (compared to that recorded in the original order of release), for the muáfídar could certainly not claim

\* NOTE.—This recognition seems to have formed part of the treaty under which the district was ceded in 1801.

to have any decrease made good to him. And accordingly in many cases where we found very considerable increases in area we passed them after sufficient enquiry to convince ourselves that the increase was not due to any fraudulent inclusion of bordering khālsa land. Where the whole of a village was revenue-free the enquiry was comparatively easy, but in cases where part was muāfi and part was khālsa it became difficult.

Where we could get distinct proof that land had actually been held revenue-free, we always allowed for the presumption in favour of the owners, and, unless there was clear ground for considering resumption necessary, we passed it as revenue-free. But many cases were so doubtful that it was only after very protracted enquiry that we could determine them, and in most of these our difficulties were occasioned by the large number of different properties comprised in the area under enquiry. For instance, suppose a village divided into two mahāls (one pattidāri and the other zamindari) and with seventeen or eighteen milks attached to the mahāls. This, I may note, is not at all a complicated instance for this district, where milks are so common in all muāfi villages. Further, suppose one patti to have been confiscated in the mutiny and assessed to revenue, and the case to be reported for orders as to the entry to be made in the muāfi register. The former muāfi register, we will suppose, shows the following entry:—

“ 20 biswas muāfi by order dated ———  
765 bīghas,      nazrána Rs. 56.”

with a remark at the end—“share of  $3\frac{1}{2}$  biswas resumed for rebellion in 1859.”

The present areas as reported are—muāfi 3,025 bīghas (kacha), khālsa 356 bīghas (kacha). The first step is, of course, to compare the whole former area, 765 bīghas pukka or 3,060 bīghas kacha, with the present area, 3,381 bīghas kacha, showing an increase of 321 bīghas; and if (as in this case) the increase is over five per cent., an enquiry has to be made as to whether there is any suspicious decrease in area in any of the bordering khālsa villages. After this, supposing it to be held that there is no ground to consider the increase in the whole area as due to fraud, the further question arises as to why the khālsa area (356 bīghas) is not fully proportionate to the share ( $3\frac{1}{2}$  biswas) resumed. This is often extremely difficult to ascertain; very often it is really due to the fact that the milks, though included in the area shown in the former register, did not form part of the 20 biswas, the area of which must be reduced, therefore, by deducting their areas before the sum showing the khālsa area can be fairly worked out. In one or two cases I found that the present village really comprised two or three former ones, and that the share resumed had not really been equal all through them. In other cases, again, subsequent orders releasing a portion of the confiscated share were discovered in the enquiry, though there was no trace of them in the register. Altogether the enquiry has been a most tedious one, especially in the Amroha pargana, where the area revenue-free is very large.

4. The following statement shows the muāfi areas in each pargana arranged according to the different registers:—

Pargana.	Muāfi in perpetuity.		Life muāfi.	Total.	Nazrána.
	Entered in register I.	Entered in register III.			
	Acres.	Acres.	Acres.	Acres.	Rs. a. p.
Morádābad ...	22,245	343	Nil.	22,588	1,465 14 2
Thākurdwāra ...	11,703	259	Nil.	11,962	2,835 11 3
Bilāri ...	7,746	245	1,991	9,982	246 0 0
Sambhal ...	16,053	335	558	16,951	1,293 0 0
Amroha ...	1,42,346	194	9	1,42,549	17,220 2 1
Hassanpur ...	33,145	96	Nil.	33,241	2,521 3 0
Total ...	2,33,243	1,472	2,558	2,37,273	25,581 14 6

This is exclusive of the lands held on payment of half or three-quarters revenue in Bilári, Thákurdwára, and Morádábád, a list of which is given in the statement attached to this chapter.

Of the muáfi released in perpetuity 19,652 acres are conditionally granted, and in a separate report, No.  $\frac{16}{1-78}$ , dated 26th January, 1881, I have shown that 259 acres of this are now held by persons who apply the income to their own purposes instead of for the object in favour of which the grants were originally made. Orders have not yet issued as to their plots, which are therefore at present included in the muáfi area. The following abstract shows the purposes towards which the income of the remaining 19,293 acres is applied, and the amount of this income may approximately be stated at eighty thousand rupees.

The assumed jama of the whole muáfi area above shown as 237,845 acres may be estimated at three lakhs of rupees, and as only a small portion is held for life or conditionally, it is clear that Government has given up a very large sum in perpetuity, even allowing for the quarter of a lakh it gets in the shape of nazrána. The 12 per cent. cess and patwári's fees have, however, been imposed on the muáfi as well as the khálsa lands\* and produce an income of about half a lakh. This tax the muáfids look on with great disgust, more especially as they now feel that there is no certainty that the demand may not be increased. So long, however, as they are not called on to pay more than the khálsa zamindars have to pay in addition to their jama, I do not think that they have any equitable ground for accusing Government of a breach of faith, and it is not at all likely that they will ever get a reduction on their present payment.

5. In order to prevent, on a future occasion, the difficulty and trouble which we have had to fight through, I have made a change in the manner of recording the muáfi properties in the registers which will, I hope, be approved. Except in the case of life muáfis, the point of real importance to have clearly recorded is the area of the grant and not the names of the present owners, who may vary within a year, and will certainly have almost completely changed by next settlement. I have therefore in registers I. and III., instead of giving all the names of the sharers, given a detail of each property now forming the whole area which corresponds with the former grant. The names of the sharers can always be ascertained from the khewats if necessary and are not required, as far as I can see, in these two registers; whereas the detail of areas will enable the officer enquiring into the tenures at next settlement to trace out with little trouble the properties included in each grant, and thus to know almost at once if any fraudulent additions have been made to the muáfi area. I have already reported on this matter, and hope that the alteration made in the former practice may be approved.

Before concluding this chapter, I may note that the grove land which has been temporarily excluded from assessment seems to be about 14,000 acres. I cannot give very exact details, as the area exempted does not agree with the total grove area, which is nearly 25,000 acres.

In the first place several so-called groves are really orchards or small fruit trees in which very valuable market garden cultivation is carried on, and which we have therefore always treated as liable to revenue; and then even in the case of real groves, up till quite recently, there was no accurate definition as to the age at which the trees were to be considered as constituting a 'grove' entitled to exemption; and Mr. Gros-thwaite and Mr. Smeaton seem to have assessed wherever the trees were not old

\* NOTE.—Small detached patches on which the 12 per cent. cess would come to less than Re. 1 have been exempted under the Board's orders, but they are not numerous.

enough to render it impossible to cultivate the land below them at a fair profit. The detail of the areas exempted is given below:—

*Statement showing the grove land not assessed in the Morádábád district in each pargana.*

Name of pargana.				Number of villages.	Number of maháls.	Bágh lands in khálisa villages not assessed owing to their being under grove.
				Villages.	Maháls.	Acres.
Thákurdwára	...	...	...	270	506	1,180·62
Morádábád	...	...	...	311	474	1,677·21
Bilari	...	...	...	438	764	3,134·55
Sambhal	...	...	...	521	765	5,356·10
Amroha	...	...	...	157	403	760·83
Hasanpur	...	...	...	560	968	1,885·80
Total	...	...	...	2,257	3,880	13,985·10

## STATEMENT I.—Showing the revenue partly released for loyal services in the Moradabad district.

Pargana.	Name of mahál.	Former jama.	Present jama.	Share released.	Remarks.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Bilari	Akrauli, 20 biswas ...	2,017 0 0	2,300 0 0	1,150 0 0	
	Abhanpur Narauli, 10 biswas, mahál Raja Jaikishan Das, now made of 20 biswas.	208 8 0	200 0 0	135 0 0	
	Barrai, 20 biswas ...	864 0 0	860 0 0	430 0 0	
	Bhikanpur Fatah-ullah, 20 biswas,	161 0 0	200 0 0	100 0 0	
	Palanpur, mahál Raja Jaikishan Das, 10 biswas, now made 20 biswas.	333 0 0	428 0 0	214 0 0	
	Patrowa, 20 biswas ...	904 0 0	1,200 0 0	600 0 0	
	Pipli, 20 biswas ...	716 0 0	820 0 0	410 0 0	
	Jafrpur, 20 biswas ...	208 0 0	380 0 0	190 0 0	Half the jama released for the lifetime of Raja Jaikishan Das and one-fourth for his son's lifetime.
	Rampur Meghan, 20 biswas ...	131 8 0	340 0 0	170 0 0	
	Raholi, 20 biswas ...	2,105 0 0	2,250 0 0	1,125 0 0	
	Farahdi, mahál Raja Jaikishan Das, 8, 6, 13, 10, now made into 20 biswas.	200 12 0	220 0 0	110 0 0	
	Farahdi, patti Ganga Bishan, Government grant.	57 15 0	34 5 0	17 2 6	
	Kareli, 20 biswas ...	686 0 0	930 0 0	465 0 0	
Thakurdwara	Koka Bāns, 20 biswas ...	635 0 0	900 0 0	450 0 0	
	Mai mahál, 10 biswas, Raja Jaikishan Das, now made into 20 biswas.	571 0 0	700 0 0	350 0 0	
	Total, Bilari	9,798 11 0	11,832 5 0	5,916 2 6	
	Sehali Khaddar, 20 biswas ...	383 1 2	500 0 0	125 0 0	
	Mansurpur 6 biswas 7 biswānsis 10 khachwānsis out of 20 biswas.	61 5 0	95 10 0	23 14 0	One-fourth revenue released for the lifetime of Nabi Baksh under G. O. No. 126, dated 19th January, 1859.
Moradabad	Mundia Gannun mahál, 6, 13, 6, 13, 7.	190 13 10	168 14 0	42 4 0	
	Nau Kanka, 20 biswas ...	629 0 0	950 0 0	420 0 0	The revenue of 8 biswas 15 biswānsis 2 kachwānsis and 19 faswānsis out of 20 biswas released for the lifetime of Resaldar Dhonkal Singh by Board's order No. 77 of 5th March, 1863.
	Total Thakurdwara	1,264 4 0	1,714 8 0	611 2 0	
Moradabad	Bekampur mahál, 10 biswas, of Raja Jaikishan Das, now 20 biswas.	179 0 0	280 0 0	140 0 0	Half the revenue released for the lifetime of Raja Jaikishan Das and one-fourth for that of his son.
	Birpur Baryar mahál, 10 biswas, Musammat Maharani.	450 0 0	700 0 0	175 0 0	One fourth jama released for the lifetime of Musammat Mahā Rani, wife of Chaubey Mohan Lal, deceased.
	Lodhipur Basu, 20 biswas ...	477 0 0	770 0 0	192 8 0	
	Total, Moradabad	1,106 0 0	1,750 0 0	507 8 0	
Sambhal	...	...	...	...	No revenue partly released in these parganas for loyalty.
Amroha	...	...	...	...	
Hassanpur	...	...	...	...	
Total of the district Moradabad,		12,168 15 0	15,296 13 0	7,034 12 6	

STATEMENT II.—*Showing the areas, revenue-free, in trust for the purposes mentioned below in the district of Morádábád.*

Number.	Name of pargana.	SERVICE OF ZIARAT.		SERVICE OF MOSQUE.		SERVICE OF THÁKURDWARA.		SERVICE OF TEMPLE OF MAHADEO.		GRANTED FOR PANDITAI.		SERVICE OF TAZIADARI.		SERVICE OF TAKIA.		SERVICE OF SHIWALA ON THE RIVER RAMGANGA.		SERVICE OF IMAMBARA.	
		Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.
1	Morádábád ...	3 plots. 1 village.	4,412 18	3	63 8	1 village. 1 plot.	2,984 3	...	...	...	...	1	70 8	3	31 9	1	18 19	...	...
2	Bhári ...	Plots 9	104 16	6	69 13	2	23 8	7	80 12	2	5	1	236 18	...	...	...	...	...	...
3	Samibhal ...	2	776 9	1 whole village.	3,289 9	1	14 2	2	23 8	...	...	...	...	...	...	...	...	...	...
4	Thákurdwára ...	4	93 18	4	28 4	...	...	26	323 17	...	...	...	...	2	18 0	...	...	2	22 2
5	Hassanpur ...	2	51 10	...	...	1	32 8	4	23 0	...	...	...	...	...	...	...	...	...	...
6	Amroha ...	1	18 10	5	884 10	...	...	...	...	...	...	1	36 7	3	25 1	...	...	2	42 11
GRAND TOTAL ...		21 plots. 1 village.	5,458 1	18 plots. 1 whole village.	4,335 4	5 1 village.	3,054 1	39	450 17	2	5 5	3	343 13	8	74 10	1	18 19	4	64 13

MORADABAD DISTRICT.

STATEMENT II.—Shewing the areas, revenue-free, in trust for the purposes mentioned below in the district of Moradabad—(concluded).

Number.	Name of pargana.	SERVICE OF FAKIRS.		SERVICE OF TIRATHS.		SERVICE OF GADDI AND ASTHAL OF FAKIRS.		SERVICE OF DHARAMSHALA.		SERVICE OF SAMADH OF MOHAN DAS.		TOTAL.		REMARKS.
		Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	Number of plots.	Area in bighas.	
1	Morádábád	...	...	...	...	...	...	...	...	...	...	12 plots. 2 villages.	7,581 5	Of three other plots entered in the former registers, two have been joined to the khálsa of the villages they are in, and one in Tánaik has been found to be perpetual muáfi held without conditions.
2	Bilári	...	...	...	...	...	...	...	...	...	...	27	520 12	Of 51 entered in the former registers 24 have been resumed and assessed on proof that the income was not being spent on any charitable or religious purpose.
3	Sambhal	...	1 3 13	2	28 3	...	...	...	...	...	...	8 1 whole village.	4,155 4	There were 11 plots in the former registers; four of these were resumed and one amalgamated with another plot of the same owner, leaving six; two new plots were, however, formed, as shown in the report.
4	Tháurdwára	...	...	...	...	...	...	1	6 19	1	5 3	40 *15	498 3 153 6	There were 62 plots, but four have been resumed and three amalgamated with others.
5	Hassanpur	...	...	2	53 1	Whole village.	5,325 4	...	...	...	...	9 plots. 1 whole village.	5,490 3	There were seven plots, one of these was resumed, leaving six; three more have been formed, one on proof that the land had really been entered in register III. at last held, though omitted from the register made up after the mutiny, and two as shown in the report.
6	Amroha	...	...	...	...	1	400	...	...	...	...	13 *7	1,406 19 205 14	There were 25 plots; six have been resumed and one new one has been formed.
	GRAND TOTAL	...	3 13	4	81 4	1 plot. 1 whole village.	5,725 4	...	6 19	1	5 3	109 4 villages. *22	19,652 6 259 0	Acres decimals. * The 22 plots thus marked are those recommended for resumption, as stated in the report.

Balance ... 87 plots  
4 villages, 19,39, 6

E. ALEXANDER,  
Settlement Officer.

## CHAPTER XVII.

### PATWÁRIS.

THE revision of the patwáris' circles, and the introduction of the new system devised by Mr. Busk for the proper maintenance of their records, formed one of the heaviest pieces of work we had to perform.

Mr. Darrah has given a clear analysis of what was actually done in his note attached, and I need only point out how I think the work might have been made easier, and what still remains to be done to secure the results at which the new system aims.

2. First, then, I think it was a great mistake not to give over the control of the patwáris and of the patwári fund income in the parganas under settlement more completely to us during the time that it was necessary that we should have charge of the patwáris at all. I think this because not only did divided authority lessen the hold we had of the patwáris' staff and, in some measure, impede our working, but the difficulties and delay about money were constant and most troublesome. In the first year, for instance, in which the new system was introduced in each pargana, the patwári fund having made no allowance for the cost of the papers, the Collector would not give us any money on this account till he received special sanction. It was, on the other hand, quite impossible to realize the cost from the zamindars, who had to pay the cess, or from the patwáris, whose income was not fixed on a scale which allowed of their paying five or six rupees without feeling it: and at first starting, in addition to the difficulty of getting the new system fairly under way, we were thus clogged by the want of funds. In a new settlement (unless the Collector is in charge of it), I think it would be found advisable to make the patwáris over entirely to the Settlement Department during the time the haftgana is being lodged under the Settlement Officer's supervision.

3. Next, we found considerable difficulty in working the new rules, owing to the large area under batái and the habit which the zamindars had got into of making their appraisements or divisions without having the patwári present.

The origin of this habit lay probably in the very large number of non-resident patwáris. As I have before stated, the condition of the tenants is below what it is in other districts and the villages are, as a rule, small and poor. The patwáris, who were mostly well-to-do men, belonging to one or other of the large patwári families of the district, naturally objected to leaving their comfortable houses in the towns and to going out into a kind of exile in these wretched villages, many of which had not even a masonry well for drinking water. If the landlord called them, they had usually no objection to accompany him in his progress from village to village for a few days; but if he had not time to wait for them, or if they had any business of a more pressing nature, such as a wedding, to attend to, the landlord carried out the work himself, and let the patwáris copy out his list when the time for filling the haftgana came on. Some of the landlords and many of the karindas found this system convenient, as it enabled them to enter exactly what they pleased in the patwáris' papers, and so we had the double difficulty of non-resident idle patwáris accustomed to rely on their landlord for the basis of their papers, and karindas and zamindars who preferred the patwári's absence to his presence. In the parganas first dealt with this was not so much felt, owing to the comparatively large cash area; but in Amroha and Hassanpur the matter was of so much importance that Mr. Smeaton drew up a special set of rules to check it. The pith of these rules was—first, that the attendance of the patwári at the time of appraisal or division of crop was insisted on, the zamindar being made responsible for giving him notice and the patwári for attending on receipt of it; and next, that the immediate record at the time of the appraisal or division made was insisted on, printed forms being furnished to the patwáris for the purpose. I have no hesitation in saying that some

system of this kind is absolutely necessary if we wish to secure any correctness in the haftgana of batái villages, and I think it is much to be regretted that the batái rules were cancelled without anything being put in their place. Unless the record of the appraisal or division is made at the time it actually takes place on the spot there is no chance of testing its correctness, and the patwári just writes down whatever the zamindar or his karinda chooses to tell him; and where appraisal is made this simply leaves the tenant at the landlord or karinda's mercy, for, of course, once the crop is cut it is nearly impossible to say what its amount was. The immediate record of the actual appraisal or division did not meet with the approval of the karindas, who found their hold on the tenants weakened and their speculations checked, and they therefore got up a howl against the rules, which was unfortunately only too successful. I still hope that when the patwáris' rules are revised, some provision will be made to secure the proper record of these transactions.

4. The non-residence of the patwáris occasioned a good deal of trouble, especially in Amroha, and it was not till very severe measures were taken that even nominal obedience to the order directing residence within their circles was secured. I have already explained the principal reason why non-residence was so common in this district, and it was quite wonderful what shifts the patwáris would often try to avoid breaking up their comfortable home and going out into what they considered "the wilds." Many of the patwáris told me that they themselves were ready enough to go, but their families absolutely refused to leave the circle of their relatives and friends and accompany them into exile, and I believe this was fairly true. Unfortunately, unless the patwári actually transplants his home, his residence almost immediately becomes merely nominal; and as his residence is, without doubt, essential to the proper performance of his duties, it is absolutely necessary that he should take his family with him to his new house. I think, however, that Government might well make the patwári some compensation for the expense of this move, or, better still, might build and maintain a patwári's house in each circle, the house remaining Government property and being occupied by each patwári whilst in office only. The pay of an average patwári is so very small that he cannot afford to pay some Rs. 20 or 30, which is what the move really costs him, and it would be much better if, instead of throwing this burthen on him, he were given a house and made to pay a small rent, say four annas a month, towards its cost.

5. In order to secure really effective work, I think also that it must soon be recognized that the patwári's pay is, as a rule, too small. I believe, myself, that it would be better to increase the size of the patwári's circle and pay him not less than Rs. 15 a month, and I know that at present it is often simply useless to dismiss an inefficient man, because a better cannot be got for the post at the existing salary, and I also know that, as a general rule, the papers of large and difficult circles, where the pay is good, are better kept than those of easier circles, where it is very small.

Further, I think that the supply of measuring instruments given for the patwári's use should be larger; it is all very well in theory to suppose that the supervisor-kanúngo has matters so well in hand as to keep the four chains allowed him passing from patwári to patwári, so that each gets it for a sufficient time. In practice almost all the chains lie at the tahsíl all the year through untouched, and the patwári makes shots at his areas as best he can. It would not be very expensive to give each patwári a rope—jarib with leather knots on it—and a brass scale, and he would then be really able to do what he now in nine cases out of ten simply pretends he does.

There can be no doubt that the new system is in the main a very good one, and I believe that it is quite possible that, properly worked, it will save a great part of the expense hitherto incurred at revision of settlement; but to do so the quality of the patwári must be worked up, and the supervising establishment must be kept up to their

work by a very large expenditure of time and trouble on the part of the gazetted officers in every district.

The supervising establishment also requires some strengthening to render a really efficient discharge of its duties possible. One step in the right direction is now being taken in giving the supervisor-kanúngos an office of their own out of the tahsíl, which will give them a chance of escaping a good deal of miscellaneous work now thrust on them in defiance of the rules. But it will, I think, be further found necessary to give each supervisor an assistant mubarrir to do as much as possible of the statistical and report-writing work. Certainly, as matters now stand, the work of supervision alone is as much as, or more than, the kanúngos can do in some of the larger parganas like Sambhal and Hassanpur.

Lastly, I think some more systematic management is required than is commonly now arranged for. One officer should be put in charge of the patwáris in each district, and he alone should have power to authorize their absents from their work on any pretext whatever. At present it is as likely as not that the patwári may be called away by some court for four or five days just in the very middle of the amaldari or batái, and the inconsiderate way in which some courts keep them in attendance for much longer than is really necessary is a further argument in the same direction. The officer in charge should also certainly be informed of all cases in which the conduct of the patwári appears to require proceedings to be taken for his dismissal or criminal punishment. Very often I have known a court deliberately record its opinion that a patwári has forged, or has committed perjury, or has cheated, without taking any further steps whatever to have him punished, or even to have a note of the facts made in his character-book. And not unfrequently I have known instances where the first intimation that any proceedings had been taken was the receipt of a decision sentencing the patwári to imprisonment or committing him for trial. The omission in the first case clearly tended to lower the morale of the patwáris as a class, whilst the want of due notice in the second rendered it impossible to arrange for the proper conduct of the work in sufficient time to prevent its suffering. Both could be easily prevented if there was one officer in special charge, and if notice were bound to be sent to him within a short time after the record of the opinion in the first class of cases and a reasonable time before proceedings were taken in the second.

*Note on Patwáris by Mr. DARRAH, Assistant Settlement Officer.*

In dealing with this subject, I propose to consider the different parganas separately in the order in which the new rules were brought into force in each.

*Morádábád.*

Mr. Smeaton submitted his report on the revision of patwáris' circles in this pargana on 29th November, 1875.

There were before settlement 133 circles. These were partially broken up and the number reduced to 116.

The average area of the old circles was 1,500 acres; the average area of the new is 1,749 acres. In addition to 116 patwáris, the majority of whom were the old men, 44 assistants were appointed; the entire staff was thus 130 men. An agreement was taken from each patwári to the effect that if he was not domiciled in his circle within six months, he would become liable to peremptory dismissal.

The salaries were fixed at from Rs. 7 to Rs. 10 a month for patwáris and Rs. 5 to 7 a month for the assistants.

The rate of pay of each patwári was fixed after consideration of—

- (1) Amount of work he would have to do.
- (2) His capacity and previous conduct.
- (3) The amount of fees the rates would allow of.

The fees imposed vary from Rs. 4 to Rs. 6 per cent. on the revised jama (differing, of course, in different villages and circles), and in every circle a saving of from 15 to 20 per cent. has been made. The fees amount to Rs. 15,300-7-3, falling at a little over Rs. 5-3-0 per cent. on the land revenue of the pargana. The total pay of the patwáris' staff is Rs. 12,552. Thus the amount of the patwári's pay is 82·04 (almost exactly) of the total fees.

The saving is Rs. 2,748-7-3, or 17·96 per cent.

There are two registrars and three supervisor-kanúngo in the pargana. One registrar draws Rs. 120 a year from the surplus of the cess, Rs. 20 a month having been added to his former pay of Rs. 30 by Mr. Smeaton on account of long service and exceptional ability. Two of the supervisors at Rs. 30 and Rs. 40 a month are paid from the surplus cess; the third drawing from the Thákurdwára sanctioned budget, two registrars being allowed for in that pargana, but only one being kept. The third supervisor was appointed, as the constant changes caused by the irregularities of the Rámghanga rendered the pargana work more than could be adequately managed by two kanúngos. Each supervisor has a chainman on Rs. 3-8-0 a month.

Mr. Smeaton's estimate for stationery was Rs. 1,000. It has been found that Rs. 700 will in all probability more than suffice, as the estimate of the patwáris' papers for 1288 is only Rs. 614-10-0.

#### *Bilári.*

Mr. Smeaton's report on the re-arrangement of patwáris' circles and kanúngos' sub-divisions in this pargana is dated 22nd July, 1876. Prior to the arrangement reported on there were 141 circles. Mr. Smeaton reduced the number to 128. The average area under each patwári used to be 1,510 acres; it is now 1,664 acres. Formerly there were great irregularities in the size of the circles, and the distribution of work was very often unfair. Now, in so far as possible, the labour has been apportioned justly, regard being had to the character of tenure and people, relation of landlord and tenant, as well as to area and population and sub-division of property. The circles, too, have been made compact with regard to the place of residence of the patwáris. Mr. Smeaton rather relaxed the vigour of the rule he adopted in Morádábád. Wherever it was found that a patwári lived within two miles of his circle, and that he was regular in attendance and punctual in his partál, he was allowed to stay where he was. In all other cases residence within the circle was insisted on, and, as in Morádábád, regular agreements to that effect were taken.

The pay has been fixed at from Rs. 7 to 12 per mensem for the patwáris and Rs. 5 to 7 for the assistants.

The rates of cess imposed vary from 3 to 6 per cent. on the new revenues. The total fees are Rs. 16,138-3-9, falling at a little over Rs. 4-8-0 per 100 of the jama. Of this, Rs. 13,464 is the sum devoted to the pay of the patwáris, falling at 83·43 per cent. of the cess. The savings amount thus to Rs. 2,674-3-9, or 16·57 per cent. of the cess. There is one registrar-kanúngo in this pargana, but as two are budgeted for annually, the additional pay thus obtained is expended on an extra supervisor-kanúngo. There are thus three supervisor-kanúngos: two paid from the savings of the cess at Rs. 30 each, and a third paid at same rate as a registrar-kanúngo from the regular budget. The patwáris' papers are estimated to cost under Rs. 750 a year.

#### *Thákurdwára.*

Mr. Smeaton submitted his report on this pargana on 22nd July, 1876. There were previous to the new arrangements 99 circles in the pargana. The number was

reduced to 95, making the average size of the circles 1,604 acres, as against 1,540 formerly. The salaries vary from Rs. 6 to 12 a month. The rate of the cess levied is nearly 6 per cent. of the new revenue. The reason the full legal rate has been applied is that the revised assessment of the pargana is lighter in its incidence than that of either Morádábád or Bilári, while at the same time the average area of the circles is less than that of either of these two parganas.

The total amount of the fees is Rs. 11,597-11-0; the pay of the patwáris' staff is Rs. 9,672, or 83.40 per cent. of the cess. The saving is Rs. 1,925-11-0, or 16.60 per cent. of cess.

There is one registrar and two supervisor-kanúngos in the pargana, drawing Rs. 30 each.

## SAMBHAL.

Mr. Smeaton's report on the re-arrangement of patwáris' circles in this pargana is dated 3rd March, 1878. There were, previous to Mr. Smeaton's revision, 174 circles. He reduced the number, as in other parganas, bringing it down to 172. In 117 circles alterations were made to a greater or less extent, 45 were maintained intact, 12 were entirely broken up, and 10 entirely new circles were constructed from the 12 broken up and parts of the 117 altered circles. The staff consists of 174 men now—172 patwáris and 2 assistants. The average area is 1,944 acres to each of the new circles. The rates of cess levied have varied from Rs. 5 to Rs. 6 on the revised assessments. The total pargana cess is Rs. 21,929, falling at almost exactly Rs. 5-13-0 per cent. on total new jama, both actual and nominal. The pay of the patwáris varies from Rs. 7 to Rs. 12 per mensem, and amounts to Rs. 18,492 per annum, falling at 84.32 per cent. of cess. The saving is Rs. 3,437, or 15.68 per cent.

There is one registrar-kanúngo in the pargana and three supervisors. Of the latter two are paid from the patwári fund, the third being treated as a registrar and paid from the budget. The circumstances correspond exactly with those of Bilári. Each supervisor has a chainman, drawing Rs. 42 a year. The pargana is a large one and the maháls numerous; consequently, the cost of the papers exceeds somewhat that of the parganas just reviewed. The 1287 papers cost nearly Rs. 800 (Rs. 747-6-10), and the estimate for those of 1288 is over Rs. 1,000 (Rs. 1,081-10-0). The difference is probably due to increase in the number of maháls and changes in the cost of materials in the three parganas just reviewed. Agreements were taken from the patwáris to enforce residence within their circles, but in the tahsíl immediately under report an order was passed by Mr. Smeaton, directing one-third of the pay of the non-resident patwáris to be stopped until they should become domiciled in their circles.

The result of this measure can best be seen by the figures furnished last October to the Director of Agriculture and Commerce. On 1st October, 1879, the year in which the order above alluded to was passed, there were 61 resident patwáris in the pargana. On 1st October, 1880, there were 161, and out of the 11 men not domiciled, 5 were newly appointed, and the cases of the others were being taken up *seriatim*. Since then up to end of November four more were reported as regularly domiciled, and the cases of the remaining seven include men who, on account of having been newly appointed or transferred, have as yet not complied with the rules.

## AMROHA.

Mr. Alexander submitted his report on the re-arrangement of patwáris' circles in this pargana on November 23rd, 1878. There were formerly 135 circles. One of these was broken up and nine new circles formed, thus raising the number to 143. The cess has, in most cases been taken at the full rate of 6 per cent. on the revenue, but in a few at only 5. It amounts to Rs. 17,090. The salaries of the patwáris come to Rs. 14,460, or 84.61 per cent. of the cess. The saving is Rs. 2,630, or 15.39 per cent. of the cess.

With regard to the residence of the patwāris in their circles, no rule similar to that passed in Sambhal, attaching one-third of the pay, was put into force in this pargana, but during the year beginning with cold weather of 1879 the great majority of the halkas were visited and the cases of the non-resident patwāris taken up *seriatim*. The result was fairly satisfactory. On October 1st, 1879, there were 20 patwāris reported resident; on same date next year the returns showed 113 men domiciled in their halkas or exempted for special reasons.

### HASSANPUR.

The character of the pargana is somewhat peculiar and has been described elsewhere in this report. It is unnecessary to say more here than that the changes which are constantly occurring on the bhúr owing to the shifting of the loose sand every hot weather, on the jhíl tract owing to the rice-fields being annually swept by the autumn rains, and on the diluvial tract in the inundations of the Ganges, entail very heavy work on the patwáris, as the boundaries between the fields are often obliterated and new ones made when the fresh cultivation begins.

The former number of circles was 120 ; there are now 153. Mr. Alexander seems to have found this large increase absolutely necessary, owing to the large size of the former circles making it quite hopeless to expect accurate work from the men in charge of them. The average area of the former circles was over 2,900 acres ; that of the new ones is about 2,200.

3 on Rs. 10 per mensem.	000	000	000	Rs. 30
4 33 9 33	000	000	000	33 36
25 33 8 33	000	000	000	33 200
91 33 7 33	000	000	000	33 637
30 33 6 33	000	000	000	33 180

Total ... Rs. 1,083 = Rs. 12,996

\* NOTE.—Mr. Alexander allowed for the cost of two extra papers, the khasra batái and the naksha amaldari, introduced under Mr. Smeaton's new batái rules, which the Board subsequently quashed.

There are four supervisors and one registrar-kanúngo in the pargana ; three of the former are paid at Rs. 30 a month each from the fund, making Rs. 1,080 a year, and the third is paid as a registrar, two having been sanctioned for the pargana, but only one having been found necessary. There are five chainmen at Rs. 3-8-0 each, drawing in all Rs. 210 a year.

Mr. Alexander estimated patwáris' papers at Rs. 950. In 1287 they cost Rs. 926-14-3, and the estimate for the papers of 1288 is Rs. 992-10-6, roughly Rs. 1,000.

Thus the expenditure, without counting miscellaneous items, comes to Rs. 15,286.

The cess, even when estimated at 3 per cent. on the declared and assumed value of both khálsa and muáfi maháls, comes to only Rs. 12,460-1-0. The deficiency is therefore Rs. 2,826, without considering the miscellaneous items, such as share of sadr establishment, &c., which have still to be taken into account. If these also be considered, the deficiency amounts, according to the table shown herewith, to Rs. 3,236. As the law now stands, this sum can be granted from the fund, and it has been so arranged for.

Inasmuch as the halkas were only finally fixed immediately before the cold weather of 1879, no severe measures were adopted to enforce the residence of the patwáris within their circles during 1879-80. They were all, however, distinctly warned that, if not regularly domiciled by the cold weather of 1880-81, they would become liable to peremptory dismissal. A few, however, became resident during 1880, for on 1st October, 1879, the returns showed 13 only, whereas on 1st October, 1880, it appeared that 45 had removed into their circles. Since then 16 more have been reported resident, as there were by the end of December only 92 non-resident men. Owing to so large a portion of the pargana consisting of alluvial land, liable to be swept each rains by any flood at all above the average in extent, it has been found necessary to exempt from residence within their circles more men in this portion of the district than in any other part of Morádábád.

Statement showing the income and expenditure of the patwári cess, being an appendix to Chapter XVII.

Statement showing the income and expenditure of the Parganas.																					
Pargana.	Number of villages.	Number of circles.	Number of assistants.	Number of supervisor kanungos.		Number of chainmen.	Number of registrar-kanungos.	Amount of cess, omitting fractions.	Charges on the cess collected in the pargana.										Balance of the cess.		Remarks.
				Paid from the pargana cess.	Extra.				Patwáris and assistants.	Pay of supervisor-kanungos.	Chainmen.	Extra allowance to registrar-kanungos.	Patwáris' papers.	Share in sadr es establishment.	Share in Directing Agricultural establishment.	Miscellaneous, including rewards.	Total.	Surplus.	Deficit.		
																				Rs.	
Moárdábád ...	320	116	14	2	1	3	2	15,300	12,552	840*	126	120†	614	45	266	88	14,651	649	...	* The 3rd supervisor-kanungo, who was found necessary owing to the large alluvial area along the Rámanga, is paid from the surplus in Bilári, where only one registrar-kanungo is required. The 840 here shown is the pay of two supervisors at Rs. 35 each. † This is a special allowance of Rs. 10 a month to one of the registrars on account of specially good service. The registrars' regular pay is met from Imperial Funds.	
Thákurdwára ...	328	95	...	2	...	2	1	11,598	9,672	720	84	...	614	44	267	64	11,475	123	...		
Bilári ...	452	128	2	2	1	3	1	16,138	13,464	720†	126	...	701	45	263	88	15,410	728	...	† The extra supervisor kanungo's pay in Bilári is met from Imperial funds, only one registrar being required.	
Sambhal ...	536	172	2	2	1	3	1	21,929	18,492	720§	126	...	1,082	45	267	97	20,829	1,100	...	§ So also in Sambhal.	
Amroha ...	602	143	...	2	1	3	1	17,090	14,460	720	126	120	853	45	267	90	16,681	409	...	And in Amroha. This 120 consists of an allowance of Rs. 5 a month for supervising the preparation of the haftgana in the city of Amroha, and Rs. 5 more for keeping up the registers in English.	
Fassanpur ...	697	153	...	3	1	5	1	12,460	12,996	1,080¶	210	...	993	45	267	98	15,689	...	3,229§	¶ The fourth kanungo is paid from Imperial funds, only one registrar being employed. § The deficit in Fassanpur is occasioned by the low revenue obtained on the dhúr land and also on a considerable area of the alluvial land along the Ganges, and also by the necessity for a strong staff to deal with the very large area of the pargana. It is met from the surplus obtained from the parganas by the patwári fund.	
Total ...	2,907	807	18	13	5	19	7	94,515	31,633	4,800	798	240	3,857	269	1,600	535	94,735	3,009	3,229		

## CHAPTER XVIII.

### CASE WORK AND CONDUCT OF SUBORDINATES.

FROM the annual reports it appears that the total number of cases decided during the course of settlement has been a little over Rs. 68,000, or at the rate of about Rs. 8,000 a year.

2. One-third of them consisted of disputes or enquiries as to entries of proprietary or tenants' rights in the newly-formed records, and the fact that the great majority were decided in favour of the plaintiffs shows the necessity which existed for revising those before existing. This will be still clearer when it is noted that for any change made thus by regular case at least three may be counted to have been made by the Khānapuri staff without any dispute being raised.

3. Applications for settlement were also numerous, and in some cases, where the question turned on the fact of whether the present occupant was in possession merely as a farmer or as a proprietor, were extremely difficult to decide satisfactorily. As a rule, however, they only concerned small plots of land, and were not nearly so troublesome as the classes mentioned below.

4. Of these, the muāfi enquiries have already been noticed in Chapter XVI., and I need only here say that there were 1,313 cases, some of which comprised enquiries into many different grants. In Morādābād and Thākurdwāra the enquiries seem to have been fewer and much less searching than in the other parganas which were subsequently taken up, especially with regard to discrepancies between the areas now found existing and those recorded in the former registers. In Amroha very minute enquiries were instituted, and it took three years to completely dispose of these cases in that pargana.

5. Boundary disputes numbered about 2,500 and were also very often tedious and difficult to decide, especially along the Rāmganga and Ganges, where it was often next to impossible to make out the former line with any certainty, owing to the extent of the changes and the inaccurate way in which the former maps were made out.

6. Still more troublesome and occupying still more time, the rent suits may be considered as coming next after the partitions and muāfi enquiries in order of difficulty. They numbered rather over 6,500, of which about 4,000 were for enhancement, about 500 for abatement, and 2,000 for commutation of rents. The enhancements were chiefly brought in Morādābād and Bilāri, and, though numerically more than the commutation cases, were hardly as important. It is very rarely that one or two tenants only apply for, or are sued for, commutation; generally a large number are parties to the case, and thus the 2,000 commutation cases probably affected a larger area than the 4,000 enhancements. I have already (in Chapter IV.) expressed my own opinion as to the results of batāi, and need therefore hardly say that I consider commutation is desirable; at the same time I am quite ready to allow that there are some cases in which it is not likely to prove successful, and that it is necessary to be cautious in carrying it out.

I should be inclined to state the case thus: the batāi system is a necessary evil under certain circumstances, and the whole question turns on what these circumstances are. As far as my own experience in this district goes, I think they are not so frequently met with as is often fancied, and I cannot help thinking that the landlords have, hitherto gained too easy credence for their view of the case. Over and over again I have found the very tenants whom the landlords have designated as utterly thriftless and sure to abscond with the crops willing and ready to give unexceptionable security for a half or even a whole year's rent, and I have noticed, as an almost invariable rule, that the better the land, the more the zamindar objects to commute, even when he is resting his objection on the probability of the tenants breaking down in a bad year. To

those who look on the zamindar of this country as though his history were the same as that of an English landlord it may seem unfair to curtail his profits for the benefit of the tenants by commutation, but it does seem to me rather too much to protest all the time that the objection is solely made with a view of preventing injury to the tenants. In, perhaps, one case out of ten it is really not advisable to commute owing to the natural characteristics of the soil, but in the other nine I believe it will be found for the tenant's benefit to do so, provided the rates at which commutation is made are moderate. Postulating therefore that, as a general rule, it would be for the tenant's advantage to pass from *batai* to cash, I admit that considerable care is required in fixing the rents and also in introducing them at a fit time; and I think that for this reason the present system of limiting the opportunity for commutation to the two or three years during which a pargana is actually under settlement is not a good one.\* It causes a rush of cases, the mere decision of which anyhow is a heavy piece of work, and which it is nearly impossible for one officer burthened with a large quantity of other work to deal with in the requisite detail. It also forces the tenants to apply at once, even though it would be much better for them to wait for a few years more, and it also renders it much more difficult for the Settlement Officer to refuse commutation than it would be if he could authorize the applicants to petition again after a short term of years. As the law now stands, a tenant to whom commutation has been refused in the present settlement has no chance of obtaining it again for thirty years—a very serious matter when it is considered how much the value of agricultural produce may very likely rise within that time, and also how much more the tenant would probably have got out of the land by better cultivation during all those years.

7. *The partition cases* may be placed first in the list for difficulty. They numbered altogether 692, and, owing to the heavy press of work at first, the bulk all remained to be disposed of till towards the end of the work. At first, indeed, no attempt seems to have been made to carry out the provisions of the Board's rules relative to the preparation of a record-of-rights in accordance with the new partition, and thus more than two hundred nominally decided cases lay over till the end of 1878 to be put into proper form and lodged. This was in addition to more than the same number of undecided cases, so that during 1879-80 partition work has been exceedingly heavy. Since the beginning of 1879 the system we have followed has been to take the area of the whole mahál (out of which partition is being made) as recorded in the attested record-of-rights for our basis, and then to prepare a map and *khasra* on the spot, showing the partition of this area with all facts relating to occupation and cultivation in the same way that the original *khasra* was filled in, but according to the year in which the partition was being made. After decision of objections and after the actual partition was approved, separate *khewats* and *jamabandis* for each of the new maháls were made out, and from their totals statement A. was filled in, a certificate being attached to show that their aggregate total exactly agreed with the total of the former mahál. The final proceeding on stamped paper was not written till this had all been done, and thus we were certain that the case was really complete when it was marked off as decided. The last cases are just now being lodged, the work having been necessarily slow, but, I hope, thorough.

8. Ejectment cases under Act XVIII. have all come to us during the years in which any pargana has been under settlement, and have altogether numbered nearly 8,000, of which about half have, however, been merely notices issued to tenants to give up *ghair-maurusi* land. Extensive powers under Act XVIII. have been conferred on all Settlement Officers, Assistant Settlement Officers, and Deputy Collectors, on settlement work, under Government Notifications No. 32 of 6th January and No. 2369 of 5th October, 1874; but both Mr. Crosthwaite and Mr. Smeaton

\* NOTE.—The period is really limited to one year, for commutation cannot well commence till after inspection is completed, and the Board's sanction has been obtained to the proposed rates.

considered it inadvisable to take up any class of cases except those which directly affected our papers. They therefore took the ejectments, but not the suits for arrears of rent or other cases of a similar nature. As a general rule the ejectment cases are very simple; the struggle, if there is one at all, having generally been fought out before the question of the tenant's right of occupancy. It is only their large numbers which renders them worth noticing at all in this place.

9. There were rather over 1,200 appeals to the Settlement Officer from his subordinates, of which about three-fourths were dismissed and one-fourth allowed. The percentage of successful appeals on the whole number of cases was thus rather less than half per cent.

10. I have now given some description of all the principal divisions of the work which has been done during the course of settlement, and it only remains to notice the conduct of the different subordinate officers, as far as I have had any opportunity of forming an opinion on it. Mr. Grothwaite and Mr. Smeaton had done so large a part of the work before I assumed charge that I am rather sorry this has fallen to me, but I think I have had sufficient opportunity of judging of the work of the three Deputy Collectors and of Mr. Darrah. Mr. Wyer had left the district before I joined at all, so I cannot say anything about him. The late Munshi, Imam-ud-din, Deputy Collector, who died in October, 1879, was a very hard-working and exceptionally honest officer, whose long and intimate acquaintance with this district was, Mr. Smeaton has recorded, of great value. His death, which occurred a few weeks before he intended to send in his application for pension, was much to be regretted, and I hope Government will show their recognition of his services by allowing the three or four villages which his heirs own (and which were conferred on him for loyal services) to remain assessed at the lenient jamas which Mr. Smeaton proposed for them.

Munshi Ram Sahai served in the settlement for rather over five years and did a large amount of judicial work. His work was not so thorough as that of either of the other two Deputy Collectors, but his decisions, as a rule, showed intelligence and were rarely reversed on appeal.

Munshi Devi Parshad has served throughout the whole course of the settlement, for which he was specially selected by Mr. H. S. Reid, the Senior Member of the Board. He is certainly the most able man of the three, and has done a very large amount of hard work honestly and efficiently. I know that Mr. Smeaton entertained a very high opinion of him, and I have every reason to do the same myself.

Mr. H. Z. Darrah was appointed in November, 1879, and has been of great assistance to me. He was appointed too late to take any part in the assessment or attestation, but he has managed with care and success two very difficult pieces of work—the partition cases and the supervision of patwáris. His work has always appeared to me very sound, and I hope an opportunity will be found of appointing him to some district in which he will be able to gain an acquaintance with some of the earlier stages of settlement work.

Amongst the ungazetted officers I think that the following are entitled to some special mention:—

(1) Narayan Dass, formerly sarishtadar, now sarishtadar in the Collector's office at Muttra.

(2) Har Sarup, his successor, now sarishtadar in the Collector's office at Bijnor.

(3) Mr. Potenger, acting head-clerk of the English office, who has come under reduction.

(4) Baki Lal, second clerk, now second clerk in the Collector of Morádábád's English office. All these men have done good work and have not spared themselves when special exertions were required, and I am glad that three of them have succeeded in obtaining permanent employment. Mr. Potenger's claims I have already submitted for the consideration of the Board and of Government.

## SUPPLEMENTARY CHAPTER

ON BATAI AND ZABTI RENTS, ESTIMATED AMOUNT OF PRODUCE FROM DIFFERENT CROPS, EFFECTS OF IRRIGATION, DIFFICULTIES IN IRRIGATION, PROPOSED SCHEMES, FUTURE PROSPECTS OF THE CULTIVATORS.

In the settlement report I have avoided going into much detail on the subject of the manner in which the rents are usually taken, because, as I have endeavoured to show in Chapter XIII., the settlement was not based on this, but on average *cash* rents, either actual or assumed. It is now advisable to examine the subject a little more closely, as it is one which clearly much affects the condition of the agricultural classes.

Antiquity of the batái system.

2. The batái system is no doubt of great antiquity. It was probably at first universal, and consisted in an actual division of the crops, to produce which the zamindar most likely supplied the capital (in the shape of the seed and the land) and the tenant the labour. The zamindar also protected the tenant against oppression and pillage, and whilst land was abundant and cultivators scarce the bargain was probably mutually satisfactory. The share of the produce which the zamindar then took was also probably small, not often exceeding one-fourth and hardly ever one-third; the remainder was ample for the tenant's wants, holding, as he did, a large area and having considerable reserves of fallow to fall back on, if necessary.

Introduction of zabti rents.

The first change probably occurred when some more enterprising tenant undertook the cultivation of crops like cotton or sugarcane, which required a good deal of trouble or expense. It is easy enough to imagine how either the zamindar grudged finding the capital, or how the tenant grudged giving the labour, under the system of actual division, and also the further complications which arose from the zamindar in some cases not having any immediate use for his share after the division. Sooner or later the remedy was sure to suggest itself in the tenant's taking the zamindar's share off his hands and paying him a sum of money instead. At first, at all events, this payment, which is locally known as zabti, does not seem to have been fixed, but to have varied according to the result of the experiment. Not improbably at first it represented the actual value of the zamindar's share after deducting expenses, and therefore necessarily varied according to the produce. Even when its *maximum* became fixed it was probably for long customary to allow a reduction if the crop turned out badly, and this principle is still recognised by most liberal landlords, unless the zabti rates are very low. It was most likely some time before the tenant was understood to take the whole risk and pay a fixed amount for certain, whether the crops turned out well or ill.

At first varying according to the harvest.

Crops on which paid.

3. The crops on which zabti rates are *almost* always paid are—

- |                |                |
|----------------|----------------|
| (1) Sugarcane. | (4) Khachiána. |
| (2) Cotton.    | (5) Rusúm.     |
| (3) Chari.     |                |

and they are common on makka, potatoes, and the better kinds of rice.

Cane.

The rates on sugarcane must be divided for the Bhadrá and Bastua, which, as stated in Chapter V., mean the cane which is planted on land which has been fallow since the previous rabi and that planted on land after a kharif crop, the former naturally paying higher than the latter. The Bhadrá rate varies from Rs. 3-4-0 (which is found in some villages of Amroha and Thákurdwára) to Re. 1-6-0 (in some villages of Sambhal and Hassanpur) per kacha bigha—that is, from about Rs. 20 to about Rs. 9 an acre; the Bastua from Rs. 2-8-0 (in Thákurdwára and Morádábád) to Re. 1-2-0 (in several parganas). In some villages of Thákurdwára and in a few in other parganas the actual division of the cane-juice or gúr, after deducting the working expenses, is still in vogue, but these are exceptional.

The rates on cotton vary from Re. 1-8-0 a kacha bigha to 12½ annas. The former is, however, a very exceptional rate, only found, as far as I know, in one or two villages, so, perhaps, it is more correct to put the limits at Re. 1-4-0 and 12½ annas. Even, thus, the difference is very considerable, amounting to Rs. 3 an acre (Rs. 8—5.)

On chari the variation is from 14 annas to 8½ annas per kacha bigha, and on khachiána from Rs. 2 to Re. 1 a per kacha bigha. It must, however, be borne in mind that both these are *crop* rates, not *annual* rents, and the higher rate on chari may sometimes be accounted for by leniency in the division of a rabi crop sown after it; whilst the khachiána rates may owe their difference in some measure to the nature of the crop commonly grown in the different villages under that name. I am sure, however, that this explanation does not account for the matter at all completely. Kusúm is not very extensively grown, and the variations in the rates paid on it are therefore of little or no significance. From Re. 1 to 12 annas may, however, be taken as the ordinary rate. On makka the common rate is from 9 to 12 annas and rice from Re. 1 to Re. 1-4-0. Potatoes are generally grown on cash-paying land, but where they pay *zabti* rates usually rank as khachiána.

4. The primary cause of the very large variations in the rates on the principal crops was no doubt the varying quality of the soil they were grown on. A cultivator could, of course, afford to pay a higher rate on the better land. But this explanation does not at all dispose of the matter, for it is altogether opposed to the fact that variations within the same mahál are hardly ever, if ever, traceable to differences in soil, but almost always to privilege.

As above noted, the old *batái* rates were almost all light, but as tenants became more numerous and the competition for land increased, higher rates were introduced; and where the former tenants were paying one-fourth, the new man paid one-third, two-fifths, and, at last even half. The *zabti* rates above described, whilst owing their original difference in the *village standards* to natural inequalities varied *within the village* according to the *batái* rates. Thus, supposing the original village standards to have been 2 and 1, the tenant of long occupation in both villages, who had managed to retain the old rate, would probably be found paying these sums and one-third *batái*; an other more recent or less fortunate would very likely be paying Rs. 2-8-0 and Re. 1-4-0 and two-fifths *batái*, and the ghair-maurusi or low-caste man Rs. 2-12-0 and Re. 1-8-0 and half *batái*. In the same way the *padhás* invariably pay a lower rate, both in *batái* and in *zabti*, than the ordinary run of tenants.

5. But though the principles may be admitted that the differences in rent are due, first, to natural differences in the value of different soils, and, secondly, to competition, it is quite impossible to account for all the variations by any such compact and definite formula as these. The relative positions and characters of the landlord and tenant are hardly summed up in the idea expressed by the term 'competition,' and they have as much to say to the matter as anything else. Given a strong and grasping zamindar and a hard-working low-caste set of tenants, like Baghwáns or Chamárs, and the original village standard will very soon disappear; supposing, on the other hand, an easy-going zamindar with a set of tenants of the same family stock as himself, and it will probably hardly vary during the term of settlement.

6. I have sometimes come across the idea that one great advantage gained by the tenant under *batái* was the impossibility, or, at all events, the great difficulty, of their rent being enhanced, except in so far as was gradually and inappreciably effected by the increasing value of the produce. But, as a matter of fact, this advantage is purely mythical. Even granting that the zamindar has not the power of directly enhancing the rate, the history of the additional import called "kharch" (to say nothing of cesses like "dhála" and "nazar") will serve to show on what an unsound basis the theory rests. The origin of "kharch" was almost beyond doubt the payment made out of the *produce before division* to the different village servants, such as the black-

Cotton.

Chari.  
Khachiána.

Kusúm.

Rice.

Potatoes.

Causes of the difference  
in rates.Rise owing to increased  
competition for land.Original difference in  
the village standards prob-  
ably owing to difference  
in quality of soil.Variation in *zabti* rates  
corresponds usually to that  
in the *batái* rates.Variations not fully ac-  
counted for either by  
difference in quality or  
competition.The theory that *batái*  
rents are only enhanced  
indirectly by increased  
value of the produce is  
unsound.

Enhancement by 'kharch.'

Origin of 'kharch.'

smith and the patwári. To this the non-resident landlords soon added a charge to defray the expenses of the servants they employed to watch and divide the crops after they were cut. Theoretically these men protected the tenants' share against thieves as well as the zamindar's, and they also saved the tenant from the expense, which the landlord argued he ought to bear, of carrying the latter's share to his store-house for him. Rightly or wrongly, the burthen was soon too tightly fixed to be shaken off, and in most villages it has been steadily added to on one pretext or another. The landlords soon found that it was an excellent contrivance for bringing up the rents of the men paying light rates to something near the same standard as those of the other tenants, and accordingly we now find that, except in a few exceptional cases, where the tenant is purposely privileged by the landlord's own free will, most of the light batái rates are burthened with a heavy kharch. In most of the parganas the kharch has, under the Board's rules, been amalgamated with the rent, and the total only is stated in the jamabandi—that is, supposing the rent to be one-third, or  $13\frac{1}{3}$  seers per maund, and the kharch to be four seers, the rent would be entered at  $17\frac{1}{3}$  seers without detail; but in Thákurdwára, where the rough khatiauni was made out before the order issued, the full details were recorded and are still to be found on many of the "inspection slips" which Mr. Crosthwaite had prepared. From these it is clear that the allowance to the patwári, "rásum," and to the village servants, "kaminá," and to the poor, "sauri," are all different from the "kharch," and do not, as a rule, vary according to the rate of batái, being generally deducted from the whole crop, whereas the kharch is usually paid from the tenant's share only, and is almost always heavier on those who pay the lighter rates.

The more grasping zamindars have further enhanced their claims by demanding additional petty payments, such as the following:—

(1) *Khákiúna*, about half or three-fourths seer per maund to make up for the dust which the zamindar assumes has got mixed up with his share of the produce and has thus added to its weight.

(2) *Nazar*, theoretically a present to the zamindar's karinda for his trouble in supervising the division of the crops, converted by some zamindars into a regular payment of a rupee or rather less from all the well-to-do tenants in addition to their regular rent.

(3) *Bidha*, a benevolence on the occasion of weddings in the zamindar's family.

(4) *Wazan kashi*, a fee on the weighments of the grain; evidently a preposterous demand in addition to "kharch," but still taken in some cases.

(5) A percentage of about an anna on the rupee over and above the fair current bazaar price in cases where the zamindar takes the value of the grain instead of the grain itself from the tenant. This is still more unjust, as it is literally making the tenant pay extra for having the trouble and expense of disposing of the produce put on him. Nevertheless, some zamindars are not above taking it; and in one case a zamindar actually had the boldness to raise an appeal because his right to levy it was not recorded in the wájib-ul-arz.

(6) *Dhála*. This is both the most iniquitous as it is the most important of these illegal exactions, and to explain it I must first briefly describe the custom of amaldári. I have already mentioned that amaldári is usually employed, like kankát, to signify the appraisal of the standing crop before it is cut, in contradistinction to the term batái, signifying actual division of the produce. How the practice first arose is not clear, but very likely it was suggested by the zabti rates. Regarding these in many villages, it became customary for each tenant to be bound to grow a certain area of zabti crops on each plough he held. The area corresponding with the term 'plough' was not very accurately laid down, but the number of ploughs each tenant was supposed to hold was known, and on this the calculation proceeded. This custom soon developed into the tenants paying the zamindar at zabti rates on a certain area, whether he grew zabti crops or not, the tenant being allowed, if he had not the full area of them,

Extra kharch imposed on tenants paying light rates in batái.

Facts obtained from the rough record of rights in Thákurdwára.

Kharch separate from the allowances and charities paid out of the common stock.

Additional demands by the landlords.

Dhála.

Practice of amaldári perhaps originated in an extension of zabti rents.

to select a sufficient area out of the land occupied by his other crops to make up the total. Of course, he naturally picked the best fields he had of these other crops (as paying the zabti rates they escaped batái), and very likely the idea may have occurred to some tenant, when he had an unusually fine crop, to offer to pay in cash on a certain further area for that particular year. To this the zamindar probably demurred, unless he also paid in cash on some field with a poor crop on it, and finally the matter would very likely be settled by the tenant's paying in cash on his whole holding after a valuation of the different fields. To a non-resident zamindar, not desirous of keeping up the custom of division for any ulterior objects, the system would naturally possess great attractions, and it is quite easy to conceive his overcoming the objections of other tenants by allowing them to pay the amount of the estimate in grain instead of in money. And once introduced, the convenience of the system would soon cause it to extend and take a firm hold on the people. The tenants would find themselves free to cut the crop as soon as it was ripe, and free to store it and sell it when, and as they liked; the zamindar, on the other hand, would find himself relieved from the vexatious task of watching the crops and dividing them, besides in most cases escaping the cost of carrying off his share in kind. Thus, as first introduced, the system was probably of mutual advantage almost everywhere. Unfortunately, the opportunities it gives for oppression were too great to be long resisted, and in the hands of the less respectable zamindars, and especially in those of the karindas, it has now become so misused that the tenants almost universally entreat to be allowed to keep to actual batái in spite of all its inconveniences. The appraisement has to be made just when the crop has ripened, almost immediately, that is before it should be cut, and when any considerable delay must cause it to deteriorate. To the tenant the loss of even one crop often means ruin, and the landlord or his karinda have thus a hold on each of them individually, which they well know how to use. The appraisement made, therefore, is usually as high as they think it possible to go, but as it is common to all humanity to make mistakes, so occasionally the crop turns out to be better than they thought it would be. It was on some occasion of this sort that the idea of "dhála" struck one of them. The crop, he argued, had turned out about twenty per cent. better than had been expected; therefore, the least the tenants could in justice do was to pay up at least ten per cent. more over and above the value of the zamindar's share as first calculated. The same argument was applied with less reason in cases where the selling price of the crop turned out more than usual, though here the zamindars got the benefit just as much as the tenant; and in process of time the dishonest and grasping landlords, without any just ground whatever, extended the system till they made dhála into a demand always claimable against the tenant, unless the crops turned out much worse than had been estimated, and further levied it on a kind of sliding scale, which invariably brought up their demand to just about as much as they could possibly squeeze out of the tenant.

The system probably at first mutually satisfactory.

Now generally misused and disliked by the tenants.

Dhála originally an extra payment levied on a crop turning out better than it was estimated to.

Since made into an unfixed demand applied to raise the rent as high as the tenant can afford to pay.

Evidence of the extent to which the zamindars have got the better of the tenants.

It is very clear evidence, I think, of how much the zamindars have got the better of the tenants in this part of the country that demands which are clearly illogical and unjust have become almost universal. Such, for instance, is the demand for kharch on amaldári at the same rates as on actual batái, though the zamindar is put to little or no expense in it where (as is usual here) the tenant pays him the value of his share in money. So is the demand for kharch or zabti crops, which is nearly universal; so, though less apparent, is the enhanced rate of kharch taken from tenants paying favorable rates in batái; and so, most emphatically, is the custom of taking dhála, which is very common.

When settlement began it seems that out of the land held by tenants rather more than two-fifths, or roughly 300,000 acres, were held on batái, the rates paid by them varying from 22 seers to 10½ (both including kharch). As before shown, the cash-paying area is chiefly found in the east and south of the district, whilst the batái land is chiefly in the north and west. In the parganas of Thakurdwára, Amroha, and Hassanpur, and also on the west of Sambhal, the income of the zamindars, therefore,

depended very much on the produce of each year, and fluctuated very considerably according to the quality of the harvests. It was not necessary, as already shown, to base the assessment of the Government revenue on the actual average of produce; but still the question of what the yield was naturally excited attention, and a very large number of enquiries were made at different times with a view to determine it. All that practically resulted from the enquiries is that we have been able to strike a rough average or, as I think is more accurate, to strike two or three averages for crops given under different circumstances. For cane, cotton, and wheat I have given general averages in Chapter V.: I now propose to give a few actual results exemplifying the subject by returns on different kinds of land, using all through the Government seer of 80 tolas.

*Kharif crops: bajra.*—In pargana Morádábád in 1283 fasli, by experiments extending over 37 villages, the yield was as follows:—

Grain	...	...	...	...	7½ maunds per acre.
Stalks	...	...	...	...	22 ditto ditto.

In the same pargana in 1284 fasli experiments in three villages gave—

				Mds.	
Grain	...	...	...	6	23

The stalks not being weighed.

In 1285 fasli, the year in which the kharif very extensively failed, the average produce in Morádábád, Thákurdwára, and Hassanpur, was—

				Mds.	s.
Morádábád	...	...	...	3	36 of grain.
Thákurdwára	...	...	...	4	21 ditto.
Hassanpur	...	...	...	1	13 ditto.

But I am inclined to believe this average to be too high, as it makes no allowance for land on which, though planted, the crops never came to anything, and this area was extensive, especially in the Hassanpur pargana.

In 1286 fasli, which was not a good year, but which may be called only slightly below an average one, the yield in three villages on the bhúr tract in Hassanpur was 4 maunds 37 seers per acre.

On the whole, I should put the average yield of bajra at 6 maunds an acre, noting that it is rarely grown without urd or moth being sown below it.

*Rice.*—In the enquiries made in pargana Morádábád in 1283 fasli, the average of the earlier rice 'sathi' was 12½ maunds grain and 22 maunds stalk; whilst that of the later and more valuable rice was 9½ maunds grain and 21 maunds stalk.

In 1284 the average of the coarse rice was only 8 maunds 26 seers (grain); whilst that of the finer was 9 maunds. In Thákurdwára, on the other hand, the averages were 13 maunds and 10 maunds respectively.

In 1285 fasli the yield, by a large number of enquiries, was found to average only 2 maunds in Morádábád, 2½ in Thákurdwára, 1½ in Bilári, and 2½ in Amroha. In Sambhal hardly any of the small area sown came to anything, and no average could be struck. In Hassanpur, on the other hand, the average was nearly nine maunds, because almost the only land sown was that along the huge jhíl below the bhúr, in which there is always water and where the danger is usually from over-flooding.

In 1287 fasli I found more than a dozen fields in pargana Amroha, where my camp was in October and November, which yielded from 16 to 19 maunds of the later rice per acre, exclusive of the weight of the stalks; and the crop was generally so heavy that in Amroha, Morádábád, Thákurdwára, large quantities were spoilt before it could be all got in, labour being scarce owing to the prevalence of fever.

For a fair average crop I should say that 13 maunds of grain and 24 of straw is about correct, but that the fluctuations are very great and that the average all-round produce, taking good years with bad, should perhaps be put rather lower.

*Cotton.*—In 1283, in Morádábád, the average was 5 maunds, including seed (by experiments in the 37 villages above mentioned).

In 1285 fasli the outturn in Hassanpur was 7 maunds, and in Bilári 6, by experiments in 12 and 5 villages respectively.

It is, however, very difficult to get any satisfactory evidence about this crop, as it takes so long to collect the produce.

*Rabi: wheat.*—By the Morádábád enquiry in 1283 fasli the average was 10 maunds grain, 18 bhusa.

In 1284 in Morádábád 8 maunds 32 seers grain.

In 1285, (an exceptionally favourable year for the dry unirrigated lands):—

In Bilári, by three experiments on each class of land—

	Mds.	Mds.
Manured land usually irrigated, but not requiring irrigation this year ... ..	14	grain 22½ bhusa.
Fair land, but unmanured (dumat 1st) ... ..	10¾	„ 17½ „
Medium (dumat 2nd) ... ..	7½	„ 12 „

In Hassanpur—

Good land (dumat 1st) in the khádar not specially worked up but naturally good ... ..

Medium land (dumat 2nd) in the khádar ... ..

Bhúr land, fair quality ... ..

10½	„	16	„
6¾	„	10	„
8¼	„	14½	„

In 1287 fasli, a fair average year:—

In Hassanpur—

	Mds.
Irrigated dumat 1st in the bángar tract ... ..	14½ „
Unirrigated dumat 1st on the bhúr ... ..	9 „
Good bhúr unirrigated ... ..	7 „

In this year, however, there was some winter rain, and the real difference between the bhúr and dumat did not come out.

Result of irrigation.

In 1286 fasli I had not time to make any personal experiments on the subject, but by means of subordinates I made enquiries in Bilári and some of the southern villages of Hassanpur regarding the difference in outturn between irrigated and unirrigated land. The results obtained were follows:—

	Mds.
Bilári: wheat irrigated ... ..	14
unirrigated ... ..	9
Hassanpur: irrigated ... ..	12½
unirrigated ... ..	7

The experiment was over a large area, but I am not satisfied as to its absolute accuracy, knowing the time and patience required to ensure this. Still it may be taken as approximate, and it seems to show that the return from irrigation is sufficient to well repay the cost wherever water can be obtained with ordinary facility. In the Bilári villages most of the irrigation was from wells, and on the Hassanpur by lift from the lagoons or streams which intersect parts of the bángar and khádar tracts.

As I have before noted, masonry wells are rarely used for irrigation, except in Bilári and the south-east of Sambhal. Kacha wells working by the lever are used in the rest of the district for cane and kachiána; but the area which can be watered from one of them is so small and the supply yielded by percolation in a dry year in

Difficulties.

January, February, and March, is so quickly exhausted that the people seem to have given up the irrigation of the rabi as a bad job, except where, as along the lagoons in south Hassanpur or along the numerous small streams in Thákurdwára, some special natural facilities have been met with. Doubtless the cane cultivation has had a good deal to do with it, for no sooner is the farmer free from the task of pressing the cane he has cut in December or January than he has to begin preparing the land and sowing his next year's crop.

Still, even allowing for this, if, as I think is the case, the cultivator can count on almost always getting four or five maunds an acre extra by irrigating in a year of average rainfall, and more in an excessively dry one, the expense which he would have to incur in using hired labour would be well repaid him; and the real reasons why irrigation of the rabi is not more common seem to me to lie first, in the difficulty of tapping the spring and thus obtaining sufficient water for a masonry well in constant use; and secondly, in the faults of character which long-continued oppression has developed in the cultivators as a body.

Of the difficulty of constructing masonry wells in the west and north-west of the district the experiment which Government is now making is sufficient proof. It seems to be established by this experiment, so far as it has now gone, that the permanent spring is, except in a few exceptional localities, at a great depth below the surface, not less than sixty and often as much as one hundred feet; and this is quite enough to account for masonry wells not being in use, though it is not alone sufficient to account for the way in which the people let their crops perish without making the use they might of their percolation wells, and of the ponds and jhils, which could with some trouble often be utilized, though they are not now.

#### Project for canals.

Several schemes have from time to time been proposed for the introduction of a canal, but all except one were found impossible, owing to the rise in the level from the Rámghanga westwards, already mentioned in Chapter I. The one scheme which was found practicable, or, at all events, not clearly proved to be the contrary, was that which came to be known as the Eastern Ganges Canal project, and which seems to have originated as early as 1855, in a desire on the part of the Government of the day to provide some system of irrigation for western Rohilkhand. After a few surveys and reports had been made, the outbreak of the mutiny of 1857 suspended all operations, and it was not till 1867 that the project was resuscitated. Then an engineer was deputed to the spot and plans were drawn up and reports furnished, but long before the matter was at all ripe the scarcity of 1868-69, by pressing severely on Bijnor, compelled the Government to provide work for the people, and the excavation of some eighteen miles of the Sambhal branch of the proposed canal, beginning at Rajabpur, on the Morádábád and Garhmukhtesar road, was sanctioned. The idea, so far as it had then been matured, consisted in tapping the Ganges at Shampur, in the Bijnor district, and bringing the canal south, leaving Kíratpur and Bijnor on the right bank, skirting Chandpur on the left, to within a mile or two of the Morádábád boundary, where the main channel was to split into two parts—one known as the Amroha branch, going past Amroha, Sirsi, Chandausi, Bisauli, Gotha, Amgaon, to Useith, where it was to terminate in the Sot nadi; the other known as the Sambhal branch going past Shaharpur, Bejoi, Islamnagar, Alampur, and Nakóra, where it was to join a small stream which almost immediately after falls into the Ganges. The object of the canal was the irrigation of (a) the southern tahsils of Bijnor, (b) the dry high-lying ridge of bhúr that extends from Chandpur, past Hassanpur and Islamnagar almost to the south of Budaun, and (c) the Sot and Gangan Doab.

Correspondence of the most voluminous nature, chiefly with reference to the carrying capacity and navigation of the canal, continued until 1873, when the last revised estimate was submitted by the Government, North-Western Provinces, to the Government of India, and with it a note by Colonel Brownlow calling attention to—

(a.)—The diminished supply in the Ganges.

(b.)—The high spring-level of the tract to be irrigated.

The Government of India called for further reports with reference to—

(a.)—The probability of the returns from the canal developing with reasonable rapidity.

(b.)—The amount of indirect revenue that might be calculated on through the absence of any necessity for remissions in bad years.

(c.)—The actual necessity of the Sambhal branch.

In response to this requisition, the recorded opinions of Colonel Brownlow and the revenue officers of Bijnor, Morádábád, Bareilly, and Budaun, were called for by the Local Government. All were unanimously opposed to the construction of the canal. Their reasons might be summed up as follows :—

(1) The pressure of a canal invariably raises the spring-level, and this in the districts to be irrigated, is so high that the river valleys and low-lying lands would become swamps, rank vegetation would be much encouraged, free drainage would be materially interfered with, and fever would result.

(2) The canal is not required in western Rohilkhand, owing to there being a fair rainfall and a large extent of low-lying land, which affords pasturage or luxuriant crops, even during seasons of drought. The sandy tracts only form 23 per cent. of the area commanded, and this bit alone would be benefited.

(3) Communications are more wanted in Bijnor than anything else. The canal would not avert the necessity of importing grain, and would never make up for the absence of good roads.

(4) The volume of water in the Ganges during spring and winter months of a year of drought is much less than was formerly supposed, and there is cause for grave apprehension that there would be a failure in the supply at the very time that irrigation would be most urgently required.

(5) Wells are universally made over the greater part of the area to be irrigated, and it is probable that the people in many places would decline to use the canal water, unless supplied at a rate which would not afford the requisite income on original expenditure.

(6) The prospect of remunerative returns are insecure, owing to the facilities for irrigation which already exist in the tracts affected, and the small difference which prevails between wet and dry rates of assessment in those districts.

The matter then remained in abeyance till 1876, when the Government, North-Western Provinces, recommended the indefinite postponement of the project on the ground that, in the opinion of the revenue officers, the scheme was financially unsound, and that the doubts formerly entertained of the sufficiency of the supply in the Ganges had been confirmed by experience, which showed that water on both sides of the river was not to be reckoned on with certainty in years of drought.

The net expenditure on the undertaking was Rs. 2,71,249, with a further charge incurred to the amount of Rs. 52,350. In November, 1877, the Government of India indefinitely postponed the scheme.

As to the professional opinions which declared the water-supply likely to be insufficient, I can pass no decision. They must be considered, if well founded, as showing that the scheme was too risky to be carried through. But it does seem to me that the benefit likely to result was understated, and I think the best proof of this lies in the truly marvellous way in which the opening of the Anúpsahr branch of the Ganges Canal has benefited the country on the opposite side of the river.

State wells.

As the scheme has been abandoned, and, now that the Lower Ganges Canal has been made, is hardly likely to be taken up again, the chief chance of introducing any system of irrigation seems to be in the success of the experiment which Government has entered on in the construction of State wells. If means can be found to tap the spring and thus obtain a permanent supply of water in the wells without the expense being prohibitive, there is, I think, little doubt but that the system can be rapidly extended.

To secure this, it will, however, be necessary to raise the cultivators to a somewhat higher standard than they have yet obtained. The landlord can do but little in the way of improvement without the real co-operation of the tenant, who actually cultivates the soil, and the double rights which we have developed have had an unfortunate tendency to hamper progress. It seems to me that we cannot, even now, after all we have done to foster the zamindar at the tenant's expense, possibly pursue with success the policy we first entered on of turning the tenant into a day labourer and making the zamindar the absolute proprietor of the land. The whole history of the country is against us, and such a policy must tend to produce a social convulsion similar to that which followed on a similar attempt in France. Unless, however, we do this, it also appears to me that the only chance we have of any real improvement of the land is to secure to the tenant in fact, and not merely in theory, much greater security than he has hitherto enjoyed under our rule, at all events in this district. It seems also to me that a fixed cash rent is essential to any real development, for, till the tenant is sure of obtaining the whole results of increased labour and expense, he will be chary of giving them.

There are cases in which improvement is so hopeless and the crops are so precarious that it is really necessary to keep to *batái*; but I believe them to be rare, and I can see no object in refusing to commute to cash merely because the lazy and unthrifty are likely to fall out in the subsequent struggle; it is surely better that these men should break down than that the thrifty and energetic should be prevented from rising, and there must be something wrong in a system which tends to foster indolence and improvidence.

During the course of the present settlement we have commuted rents on about 85,000 acres, as shown in the lists attached to this chapter, and except in Thákurdwára, where the precarious nature of the rice crops was perhaps hardly sufficiently considered, the commutations have up to the present time stood their ground well.

From a return furnished by the tahsildars, I find that out of 65 villages in which commutations were made in Morádábád, the tenants of only 6 reverted to *batái*; in Thákurdwára, out of 179 villages, 27; in Amroha, out of 136 villages, 20; and in Sambhal, out of 71 only 1 has gone back, and the rest will now probably hold out and keep to their cash payments always. In Bilári only miscellaneous holdings were commuted; and in Hassanpur, as the cash rents only came into force from 1287 *fási*, it is too early yet to say what the result will be, though I have every confidence in it.

It seems to me that with the wide margin there is for improvement, and with the much increased value of agricultural produce, the cultivators have now got a good opportunity for making their way; and I believe and hope that they will be protected in doing so by legislation, of which I look on the new Land Act of Bengal as a good commencement.

*Abstract showing the commutation cases of pargana Sambhal, zila Morádábád.*

Number of villages.	Number of cases.	Number of pargana.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
71 villages	130 cases	Sambhal Maurusi Ghair mau- rusi.	49,211 19 48,203 19 1,008 0	7,689 37 7,531 87 167 50	Rs. a. p. 24,819 8 0 24,280 8 0 539 0 0	Rs. a. p. 3 3 8	

*Abstract showing the commutation cases of pargana Morádábád, zila Morádábád.*

Number of villages.	Number of cases.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
65 villages	106 cases Maurusi Ghair-mau- rusi.	17,515 7 17,468 0 47 7	2,736 77 2,729 37 9 40	Rs. a. p. 10,531 13 0 10,502 3 6 29 9 0	Rs. a. p. 3 13 7	

*Abstract showing the commutation cases of pargana Thákurdwára, zila Morádábád.*

Name of pargana.	Number of villages.	Number of cases.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
Thákurdwára	179 villages	466 cases	Maurusi. 179,064 4	27,548 33	Rs. a. p. 95,088 7 11	Rs. a. p. 3 7 2	

*Abstract showing the commutation cases of pargana Amroha.*

Pargana.	Number of villages.	Number of cases.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
Amroha	136 villages	222 cases Maurusi Ghair-mau- rusi.	84,885 14 84,013 12 772 2	13,263 39 13,142 75 120 64	Rs. a. p. 45,337 3 0 44,979 3 0 338 0 0	Rs. a. p. 3 6 84	

*Abstract showing the commutation cases of pargana Bilári.*

Pargana.	Number of villages.	Number of cases.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
Bilári	18 villages	23 cases	Maurusi. 6,148 12	960 72	Rs. a. p. 3,596 1 9	Rs. a. p. 3 11 10	

*Abstract showing the commutation cases of pargana Hasanpur, zila Morádábád.*

Number of villages.	Number of cases.	Area in bighas.	Area in acres.	Fixed rent.	Rate per acre.	Remarks.
194 villages	310 cases Maurusi Ghair-mau- rusi.	194,529 8 184,102 9 10,426 19	30,393 65 28,784 44 1,629 21	Rs. a. p. 76,692 12 6 73,266 9 0 3,426 2 9	Rs. a. p. 2 8 4	

## APPENDIX A.

*Showing the different Officers appointed to the Morádábád Settlement.*

ALEXANDER, E. B.

On the 1st February, 1878, took charge of duties as Assistant Settlement Officer, in Morádábád settlement.

By G. O. No. 1001, dated 1st May, 1879, placed in charge of the Morádábád settlement during absence of Mr. D. M. Smeaton or until further orders.

CROSTHWAITE, C. H. T.

By G. O. No. 1275A., dated 9th August, 1872, placed in charge of the Morádábád settlement, being transferred from Etáwah, where he was Settlement Officer.

By G. O. No. 1603A., of 25th September, 1872, invested with powers, under section 8 of Act XIV. of 1863, of a Collector, as described under Act X. of 1859, for decision of suits mentioned in section 23 of Act X. of 1859 and Act XIV. of 1863.

By G. O. No. 1160A., dated 23rd April, 1873, promoted from second grade to first grade Settlement Officer.

By G. O. No. 35A., dated 6th January, 1874 to be Settlement Officer, Morádábád.

By G. O. No. 537A., dated 27th February, 1874, vested with powers of a Collector, under sections 23 to 29 and 107 to 139 of Act XIX. of 1872.

By G. O. No. 502 of the 21st March, 1874, to be a Special Magistrate and invested with powers of a Magistrate of the first class for trial of offences under Chapter X. (contempts of court) of the Indian Penal Code.

By G. O. No. 2189A., dated 11th September, 1874, vested with powers of a Collector in regard to applications by tenants contesting notice of ejectment, under sections 39 and 99, clause (b), of Act XVIII. of 1873.

DARRAH, H. Z.

By G. O. No. 335, dated 12th November, 1879, Assistant Collector, Morádábád, under section 13 of Act XIX. of 1873, to be an Assistant Collector of the first class, and to be invested with powers of an Assistant Collector of 1st class under section 97 of Act XVIII. of 1873, and under section 33 of Act XIX. of 1873 with the power of an Assistant Settlement Officer, to be exercised within the Morádábád district.

DEVI PARSHAD, *Tahsildar, Gházipur.*

By G. O. No. 2235, dated 19th December, 1872, to be Settlement Deputy Collector in the Morádábád district.

By G. O. No. 2189, dated 11th September, 1874, invested with powers in regard to applications by tenants contesting notice of ejectment under sections 39 and 99, clause 5, of Act XVIII. of 1873.

IMAMUDDIN (*deceased*), *Tahsildar of Morádábád.*

By G. O. No. 2771A., dated 13th December, 1873, Tahsildar of Morádábád, to be Settlement Deputy Collector in that district.

By G. O. No. 2772A., dated 13th December, 1873, invested with powers under section 8 of Act XIV. of 1863 for trial of cases under section 23 of Act X. of 1859 and Act XIV. of 1863.

By G. O. No. 314A., dated 3rd February, 1874, to be Settlement Deputy Collector, as announced in Notification No. 2771, dated 13th December, 1873, to have effect from 1st December, 1873.

By G. O. No. 2189 of 11th September, 1874, invested with powers in regard to applications by tenants contesting notice of ejectment under sections 39 and 99, clause (b), of Act XVIII. of 1873.

By G. O. No. 395, dated 19th February, 1879, to be a Deputy Collector of the 4th class, *vice* Ali Muhammad Khan, deceased.

RAM SAHAI, *Tahsildar of Etawah.*

By G. O. No. 913A., dated 17th May, 1875, to be Settlement Deputy Collector and to be posted to the Moradabad district.

By G. O. No. 1100A., dated 7th June, 1875, invested with powers of an Assistant Settlement Officer under Act XIX. of 1873, and special powers under clauses 2 and 3 of section 238 of Act XIX. of 1873.

By G. O. No. 111, dated 1st June, 1875, invested with powers of Assistant Collector of 1st class under sections 107 to 139 of Act XIX. of 1873 and under section 97 of Act XVIII. of 1873.

SHEATON, D. M., *Officiating Settlement Officer, Mainpuri.*

By G. O. No. 3266A., dated 3rd October, 1872, transferred to the Moradabad Settlement as Assistant Settlement Officer.

By G. O. No. 502A., of 21st March, 1874, to be a Special Magistrate and invested with powers of a Magistrate of the 1st class for trial of offences under Chapter X. (contempts of court), Indian Penal Code.

By G. O. No. 709A., dated 23rd March, 1874, authorized to officiate as Settlement Officer, 3rd grade, and, under section 38 of Act XIX. of 1873, to be in charge of the settlement of Moradabad during absence on leave of Mr. C. H. T. Crosthwaite, or until further orders.

By G. O. No. 2189, dated 11th September, 1874, invested with powers of Assistant Collector in respect to applications by tenants contesting notices of ejectment under sections 39 and 99 of clause (b) of Act XVIII. of 1873.

By G. O. No. 579, dated 10th April, 1877, from Officiating Settlement Officer, 3rd grade, to be a Settlement Officer, 3rd grade, with effect from February, 1879.

On proceeding to Rangoon, British Burmah, to join appointment of Settlement Secretary to Chief Commissioner, made over charge of the Moradabad Settlement Office on the 17th April, 1879, to Mr. E. B. Alexander.

SANAULLA, *Tahsildar of Bareilly.*

By G. O. No. 770A., dated 10th September, 1869, appointed to officiate as Deputy Collector, under Regulation IX. of 1833, in the Settlement Department, Moradabad.

WYER, T. R., *Assistant Settlement Officer.*

By G. O. No. 903A., dated 15th May, 1875, invested with the powers of an Assistant Collector of the first class under sections 23 to 29 and 107 to 139 of Act XIX. of 1873, and with special powers described in clauses 2 and 5 of section 238 of the said Act, to be exercised in the Moradabad district.

Took over charge of duties as Assistant Settlement Officer of Moradabad district on the 5th June, 1875, and made over charge on the 26th May, 1877.

*General Order concerning Settlement Officers and Assistant Settlement Officers.*

By G. O. No. 2369A., dated 5th October, 1874, under sections 97 and 103 of Act XVIII. of 1873, Settlement Officers and Assistant Settlement Officers vested with powers of Assistant Collectors of 1st class, and especially vested with powers described under section 100 of the said Act.

*General Order concerning Deputy Collectors.*

By G. O. No. 1347A., dated 30th June, 1873, invested with powers of a Collector under section of Act. XIV. of 1873, as described in Act. X. of 1859.

By G. O. No. 32A., dated 6th January, 1874, whether covenanted or uncovenanted, who have received powers of a Deputy Collector under Regulation IX. of 1833, to be Assistant Collector of the 1st class under Acts XVIII. and XIX. of 1873.

By G. O. No. 1270A., dated 28th June, 1875, in supersession of Notification No. 36A., of the 6th January, 1874, with effect from this date, all who are or may be appointed as Deputy Collectors for employment in settlement work to be Assistant Settlement Officers under section 38 of Act XIX. of 1873, and to be invested with powers under clauses 2 and 5 of section 238 of the same Act.

By G. O. No. 1271 all persons who are or may be appointed to be or to officiate as Deputy Collectors for employment in settlement work to be Assistant Collectors of the 1st class under section 13 of Act XIX. of 1873, and be invested with powers of an Assistant Collector of the 1st class under section 97 of Act XVIII. of 1873.

## APPENDIX B.

Extract from a note kindly supplied by DR. R. SANDERS when Civil Surgeon of Moráddábád.

### Question.

I.—Variation in the climate in different parts of the district: what parts are the most salubrious and what are the reverse? To what extent does the thermometer vary (on an average of five years) in the different months of the year and at the different localities where observations have been made?

II.—What kinds of diseases are most common in the various localities, and to what kind is the largest number of deaths due?

III.—What common medicines are remedies? Do the people use against these diseases other remedies than those provided for them at the Government dispensaries?

### Answer.

I.—Parganas Hassanpur, Amroha, Sambhal and Bilári are salubrious, but Thákurdwára is somewhat the reverse.

Table showing the variation of thermometer kept in jail for the last 1½ years is herewith annexed.

II.—Small-pox, fevers, and bowel complaints were most common in almost all the mortuary circles during the last five years. To fevers the largest number of deaths are due.

III.—The people do not use any drugs in the cure of small-pox; they depend on nature and perform religious rites to assuage the displeasure of goddess "Sitla."

To the following medicines the generality of the inhabitants have recourse in the treatment of fevers:—

(a) *Nusrani system*.—Starving the patients is the essence of this system of treatment, with a view to clearing the bowels; the *baidis* administer no medicine as febrifuge, but they use hartál (sulphate of arsenic), nim leaves, bark, chireta, jorkas, malti basant, abhrak, and various sorts of mineral tonics. In bowel complaints as in diarrhoea, bél, opium, tamarind-juice, and various sorts of astringents are given.

In dysentery, gum, opium, pomegranate leaves, and tamarind, with curds, are used.

(b) *Yunani system*.—In fevers purgatives are invariably and repeatedly used. The *hakims* do not starve the patients, but strongly object to the use of milk in fever. They believe that milk aggravates fevers and produces 'nazla,' a sort of vitiated cerebral fluid which, according to their notions, is the

principal cause of catarrh, bronchitis, and dysentery. The following medicines for fever are commonly used:—Gul banafshas, gáo Zubán unnáb, reshakhatmi, banslochan.

In diarrhoea the *Hakims* administer tamarind-water, aniseed-water, rose-water, zahr mokra, and decoction of poppy seeds.

In dysentery, tamarind-juice, gum acacia, pomegranates, belladonna used.

IV.—What is the number of Government dispensaries and where are they situated? Are there any dispensaries maintained solely by private charity?

IV.—There are one <sup>new</sup> and four branch dispensaries in this district: they are situated at Chandausi, Bilari, Amroha, Sambhal, and Morádábád. The Bilari dispensary is solely supported by Rao Kishen Kumar, except the pay of Native Doctor and Europe medicines.

V.—Cost of each Government dispensary monthly for five years.

V.—The monthly cost of each dispensary is as follows:—

Year.	Morádábád.	Chandausi.	Bilari.	Amroha.	Sambhal.
1873 ...	224	62	35	60	41
1874 ...	218	64	35	60	49
1875 ...	216	66	35	77	55
1876 ...	224	92	35	85	47
1877 ...	211	89	36	82	48

Thermometer, 1877-78.

January	1877	...	...	72	47
February	"	...	...	71	44
March	"	...	...	90	52
April	"	...	...	98	61
May	"	...	...	116	75
June	"	...	...	115	83
July	"	...	...	113	81
August	"	...	...	101	92
September	"	...	...	99	79
October	"	...	...	91	58
November	"	...	...	70	60
December	"	...	...	68	45
January	1878	...	...	62	48
February	"	...	...	82	48
March	"	...	...	92	77
April	"	...	...	96	74
May	"	...	...	104	82
June	"	...	...	116	83
July	"	...	...	112	81
August	"	...	...	109	79

R. C. SANDERS, M.B.,  
Civil Surgeon.

# APPENDIX C.

Statement showing the expenditure of Moradabad Settlements from October, 1872 to 31st December, 1880.

Name of year.	Settlement Officer's salary.	Assistant Settlement Officer's salary.	Uncovenanted Deputy Collectors' salaries.	Pay of fixed establishment.	Tentage allowance of officers.	Travelling allowance of establishment.	Total fixed establishment.	Moradabad.			Bilāri.		
								Total area in acres.	Expenditure.	Cost per acre.	Total area in acres.	Expenditure.	Cost per acre.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. a.			Rs. a. p.	
October to December, 1872 ...	...	...	653 3 7	1,005 0 0	258 0 0	163 3 6	2,079 7 1	...	2,808 4 3	...	...	...	...
January to ditto, 1873 ...	19,500 0 0	4,900 0 0	3,000 0 0	6,415 8 0	1,804 15 0	996 7 4	36,616 14 4	...	30,872 4 0	...	...	184 8 3	...
Ditto ditto, 1874 ...	15,489 15 4	4,412 2 4	6,250 0 0	8,019 10 11	2,969 0 0	908 15 8	38,049 12 3	...	41,179 0 5	...	...	3,343 3 2	...
Ditto ditto, 1875 ...	14,350 0 0	6,708 13 3	7,723 5 4	10,418 6 6	2,980 14 0	1,294 2 1	43,475 9 2	...	58,888 1 5	...	...	13,441 10 2	...
Ditto ditto, 1876 ...	13,800 0 0	7,200 0 0	6,500 0 0	12,529 13 4	2,660 0 0	1,147 6 8	43,837 4 0	...	3,469 2 1	...	...	7,872 15 6	...
Ditto ditto, 1877 ...	14,832 2 3	2,400 0 0	6,000 0 0	13,946 14 2	2,464 2 0	940 4 11	40,583 7 4	...	10,455 1 5	...	...	16,131 3 8	...
Ditto ditto, 1878 ...	6,524 13 6	10,532 4 0	8,500 0 0	17,116 10 10	2,740 8 0	1,231 5 8	46,645 10 0	...	...	...	...	14,401 12 5	...
Ditto ditto, 1879 ...	13,650 0 0	2,600 0 0	8,533 5 4	15,430 9 2	1,693 0 0	772 5 1	42,679 3 7	...	183 8 11	...	...	770 1 2	...
Ditto ditto, 1880 ...	12,550 0 0	4,800 0 0	5,500 0 0	14,486 9 3	2,153 0 0	825 10 11	40,315 4 2	...	20 15 5	...	...	191 3 8	...
Total ...	1,10,699 15 1	43,553 3 7	52,659 14 3	99,369 2 2	19,723 7 0	8,279 13 10	3,34,282 7 11	2,01,193	1,47,876 5 71	0 11 9	2,53,085	56,336 10 0	0 3 6

# APPENDIX C.

Statement showing the expenditure of Moradabad Settlement from October, 1872 to 31st December, 1880.—(concluded).

Name of year.	Thakurdwara.			Sambhal.			Amroha.			Hassanpur.			Total expenditure pargana-war.	Office house-rent.	Grand Total.
	Total area in acres.	Expenditure.	Cost per acre.	Total area per acre.	Expenditure.	Cost per acre.	Total area in acres.	Expenditure.	Cost per acre.	Total area in acres.	Expenditure.	Cost per acre.			
		Rs. a. p.			Rs. a. p.			Rs. a. p.			Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
October to December, 1872 ...	...	...	...	...	...	...	...	...	...	...	...	...	2,508 4 3	...	4,887 11 4
January to ditto, 1873 ...	...	...	...	...	...	...	...	...	...	...	54 0 0	...	1,110 12 3	523 8 0	62,251 2 7
Ditto ditto, 1874 ...	...	3,953 13 9	...	...	467 1 1	...	...	...	...	...	...	...	48,43 2 5	718 8 9	87,711 7 5
Ditto ditto, 1875 ...	...	10,049 5 4	...	...	15,150 2 2	...	...	1,005 5 3	...	...	...	...	98,534 8 4	1,247 14 4	1,43,057 15 10
Ditto ditto, 1876 ...	...	8,296 7 5	...	...	23,308 13 1	...	...	32,158 2 7	...	...	398 14 9	...	75,504 8 3	1,200 0 0	1,20,541 12 3
Ditto ditto, 1877 ...	...	16,218 5 1	...	...	11,270 4 11	...	...	17,267 11 0	...	...	260 2 5	...	71,602 12 6	1,200 0 0	1,13,386 3 10
Ditto ditto, 1878 ...	...	8,684 11 8	...	...	22,171 3 10	...	...	25,104 9 2	...	...	41,656 4 5	...	1,11,364 9 6	1,650 0 0	1,60,260 3 6
Ditto ditto, 1879 ...	...	375 15 1	...	...	16,453 5 6	...	...	18,299 9 10	...	...	50,312 15 10	...	86,395 8 4	1,650 0 0	1,30,724 11 11
Ditto ditto, 1880 ...	...	242 0 2	...	...	882 12 3	...	...	1,622 2 5	...	...	39,254 10 4	...	42,133 12 3	1,200 0 0	83,649 0 5
Total ...	1,51,139	47,820 10 6	0 5 0	2,92,259	29,569 11 8	0 4 9	2,48,846	95,457 8 3	0 6 2	3,58,850	1,31,936 15 9	0 5 11	5,68,997 14 1	9,152 15 1	9,12,470 5 1

Translated by  
BALDEO SAHAE.

E. ALEXANDER,  
Settlement Officer.

# APPENDIX D.

Statement showing the jama of last settlement as declared, and as after corrections up to the time of giving out the new settlement, and the new jama, excluding nazrána on the mudfis.

Name of tahsil.	Jama of former settlement, deducting nazrána.	Jama after corrections up to present settlement.	Proposed jama after corrections up to date deducting nazrána.	Rates of former jama on present area.			Rates of expiring jama on present areas.			Rates of proposed jama on present area.		
				On total area.	On malguza area.	On cultivated area.	On total area.	On malguzari area.	On cultivated area.	On total area.	On malguzari area.	On cultivated area.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
36 Morádábád ... ..	1,81,480 0 0	2,02,254 1 2	2,59,738 6 0	1 3 1	1 3 7	1 11 5	1 2 1	1 6 5	1 14 10	1 7 3	1 12 4	2 7 8
Bilári ... ..	2,31,968 0 0	2,47,029 14 0	3,38,968 12 0	1 2 3	1 4 2	1 7 10	1 3 6	1 5 6	1 9 4	1 15 8	1 13 5	2 2 10
Thákurdwára ... ..	1,80,799 4 9	1,81,962 13 7	1,82,075 4 0	1 4 6	1 7 6	1 15 6	1 4 8	1 7 8	1 15 9	1 4 8	1 7 8	1 15 9
Sambhal ... ..	2,67,130 0 0	2,87,925 3 0	3,51,015 12 0	0 15 0	1 0 4	1 3 11	1 0 2	1 1 7	1 5 6	1 3 10	1 5 7	1 10 4
Amroha ... ..	1,09,102 13 11	1,00,447 12 0	1,15,827 0 0	0 13 10	0 15 8	1 6 10	0 15 2	1 1 2	1 9 4	1 1 6	1 3 9	1 12 9
Hassanpur ... ..	1,80,932 13 0	1,81,849 3 4	1,83,062 10 0	0 8 9	0 9 10	1 2 11	0 8 11	0 9 11	1 3 4	0 9 0	0 10 0	1 3 6
Total ... ..	11,51,413 15 6	12,01,467 15 1	14,30,688 12 0	0 14 7	1 0 8	1 7 2	0 15 6	1 1 6	1 8 7	1 2 5	1 4 9	1 13 4