

OF THE  
BIJNOR DISTRICT.

(ELEVENTH REVISION.)

**Frederick James Pert, Esqr., C.S., Settlement Officer.**



ALLAHABAD:

NORTH-WESTERN PROVINCES AND OUDH GOVERNMENT PRESS.

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FROM

THE SECRETARY TO THE BOARD OF REVENUE,  
NORTH-WESTERN PROVINCES AND OUDH,

TO

THE CHIEF SECRETARY TO GOVERNMENT,  
NORTH-WESTERN PROVINCES AND OUDH,  
REVENUE DEPARTMENT.

*Dated Naini Tal, the 1st September 1899.*

SIR,

*Present :*  
HON'BLE MR. J. J. D.  
LA TOUCHE, C.S.I.

I AM directed to submit the Final Settlement Report of the Bijnor district along with the review thereof by the Commissioner of Rohilkhand.

2. The tract of which the settlement is now reported includes the whole of the Bijnor district with the exception of four parganas and certain forest areas in which the current settlement does not expire till 1903 or 1904. The result of the new settlement is to raise the revenue by 30 per cent. from the expiring demand of Rs. 8,20,358 to Rs. 10,66,927 including the assessment of the alluvial maháls.

3. The last settlement which was carried out during the years 1864 to 1866 is known as the tenth settlement and by it the revenue demand was reduced from Rs. 8,81,392 to Rs. 8,19,961. It professed to take 50 per cent. of the assets while the ninth settlement professed to take 66 per cent. But the ninth settlement was mainly based on the experience gained in the earlier short term settlements. When the district first came under British rule in 1801 no proprietary rights were recognized. Rough statements of village areas and of former rentals enabled the Collector to fix a minimum demand and the right to collect rent and pay revenue was then put up to auction with the minimum demand as an upset price, the highest bid accompanied by suitable security being accepted. The average demand of the last 5 settlements in the whole district was Rs. 11,24,488, the final demand of the ninth settlement was Rs. 11,83,585. At the time of the tenth settlement it was the generally received opinion that Bijnor was one of the most heavily assessed districts of the Province. The tenth settlement with an increase of 25 per cent. in the cultivated area was admittedly a lenient settlement, but in confirming it for 30 years His Honour the Lieutenant-Governor expressed his opinion that it had not been proved to be inadequate. The incidence of the revenue was heavy compared with that of adjoining districts. A very small area was effectively protected by irrigation, and the disastrous effects on the district of the drought and famine of 1877-78 showed that allowance must be made for similar calamities in future. If rents ruled high owing to their being taken in kind, they were liable on the other hand to be greatly reduced by a year of bad rainfall or low prices.

4. The famine of 1877-78 was the only serious check to the prosperity of the district during the expiring settlement. In that year not more than half the autumn instalments could be collected and in 1879 the Collector reported that, considerable as was the relief granted, money had to be borrowed at a high rate of interest and on a large scale, and much jewelry was sold or pawned. Registered deeds and transfers of property showed a heavy increase and there was much mortality and emigration. The effects of the famine though very perceptible in the census of 1881 were however transient. Owing to the proximity of the mountains and the large extent of forest the district usually enjoys an abundant and regular rainfall. Mr. Pert (paragraph 11) has noted that during the last 35 years there have been only 4 years in which the rainfall was excessive and four only in which it was abnormally

deficient. Irrigation is seldom required and it is not the custom to irrigate even where wells can be easily made. Masonry wells are never used for irrigation and in the year of verification when all fields watered in the year of record or in any of the three preceding years were classed as irrigated, the irrigated area amounted only to 25,069 acres or 5·8 per cent. of the cultivated area of 432,139 acres. A succession of wet years such as occurred from 1890 to 1894 seriously affects the health of the cultivators in a submontane tract and the cultivation of land which ordinarily requires no irrigation. When drought does come the district occupies a very different position from that of its more fortunate neighbours across the Ganges.

5. Though the district is no better assured against the vicissitudes of seasons than of old, Mr. Pert is able to bear testimony to the comparatively comfortable and prosperous condition of the landowning and cultivating classes. Despite the disadvantages caused by the absence of irrigation, the people were able to resist the effects of the drought of 1896-97. Since last settlement the Oudh and Rohilkhand Railway has been extended right through the district, and though the want of feeder roads is noticed, and though there are only 29 miles of metalled roads in the whole district, the rail-borne traffic in agricultural produce is large. The great staple of the export trade is sugar, the average export of which, by rail for the last 8 years is valued at 23½ lakhs of rupees.

6. The rental system of the district is still undeveloped and has hardly changed at all in the last sixty years. The distinctions of soil have been recognized from time immemorial, but soil rates are unknown. Rent is customarily paid by appraisement or division of the produce; but from this appraisement or division certain crops, of which sugarcane covering 50,000 acres is the most important, are exempted. These crops pay a fixed cash rate called *zabt* on the unit of area. The rates roughly correspond with the soil value of different villages but there are great variations. The rate for cane is said to vary from Rs. 43-3-2 to Rs. 4-6-9 per acre, the average being about Rs. 20 which is the rent payable for two years. The average rate for cotton (21,000 acres) is Rs. 7, for maize (13,000 acres) Rs. 4.

7. According to the usual custom therefore, the landlord collects cash rents on the area of certain crops, and divides the produce of the remaining crops. The rate of division is high, commonly one-half, and no distinction is made between the rents of occupancy and non-occupancy tenants. But it was and is customary for the landlord to agree with the whole cultivating community to receive from them a lump sum in lieu of his share of the produce and the cash rents. These agreements which are locally known as *nakshi* leases are made for short terms, three to five years, and the right of the landlord to revert to grain rents on their expiration is universally recognized and acted on. There is thus a perpetual interchange between the system of cash leases and that of receiving rent in kind and by "*zabt*" rates. The amount of the "*nakshi*" lease is distributed by the tenants with the aid of the patwari over the holdings. The basis of the cash lease is the rent which the landlord obtains under a perpetually recurring system of produce rents, and the cash leases are thus kept very closely in touch with the value of produce. It has been found (paragraph 50) that the recorded cash rate has risen since last settlement from Rs. 3-15-3 to Rs. 5-5-3 or by 34·8 per cent., while the estimated rise in prices (paragraph 52) has been between 35 and 40 per cent.

8. It is mainly on these cash leases that the present settlement is based. The Settlement Officer (paragraph 65) had an area of 196,116 acres for which a cash rent of Rs. 10,49,345 was recorded, giving an incidence of Rs. 5-5-7 per acre. The rent rolls were examined and compared with former cash leases, with the rent rolls of similar villages and with the result of the circle soil rates. They were found, as a rule, to be very correctly recorded. Out of 3,547 mahals brought under assessment, the rent rolls of 24 only were rejected for concealment, of 99 for rack-renting and of 104 for inadequacy and the total accepted rental was Rs. 10,48,866, differing only

by Rs. 479 from the recorded rental. The circle rates worked out by Mr. Pert gave an incidence of Rs. 5-1-7 on the cash-paying area as compared with Rs. 5-5-7, the actual incidence. They gave a rental of Rs. 10,00,340 and there can be no doubt that the accepted rental is a full one. A few landlords and notably the Court of Wards have not pressed for a high rent at each renewal of the cash lease, but ordinarily the rents are as high as the tenants, who are anxious to avoid reverting to rents in kind, will agree to. Mr. Pert (paragraph 66) has given the statistics of 54,963 acres which were formerly leased, but are now again under grain rents. The amount of the leases was Rs. 3,00,827, the valuation of the same land by standard rates is 2,83,612. The fact that Mr. Pert was obliged to reject 99 leases as rack rents, renders it doubtful whether the cause of reversion to grain rents was because the landlord hoped to receive more under that system, or because the cash rents had been pitched so high that they broke down.

9. This last instance offers evidence that the circle rates give an adequate valuation of the land, and it was by circle rates, or modified circle rates, that the large area, 205,056 acres, under grain rents was valued. It must not be forgotten that the grain-rented villages of Bijnor are villages which pay cash crop rents as well as rents in kind. The crop rents paid under the *zabti* system have not been included in the cash rents accepted by the Settlement Officer. This fact will be brought out more clearly by a reference to Appendix III of the report which gives the average recorded cash rental including crop rents for the past 12 years. The figures are:—

				Area.	Rent.	Rate.
				Acres.	Rs.	Rs. a. p.
Average cash-rental	...	...	...	249,880	13,80,040	5 8 4
Average grain-rental	...	...	...	1,59,363	4,94,025	3 1 7
Total				409,243	18,74,065	4 9 3

With this may be compared the figures of the accepted rental given in paragraph 73.

				Area.	Rent.	Rate.
				Acres.	Rs.	Rs. a. p.
Cash-rented	...	...	...	196,116	10,48,866	5 5 7
Grain-rented	...	...	...	205,056	9,20,779	4 7 9
Added for land out of cultivation	...	...	...	8,638	22,745	2 10 2
Total				409,810	19,92,390	4 13 9

Mr. Pert has noted (paragraph 50) that the record of grain rents is incorrect and generally understated. But it is often exaggerated when a high appraisement is recorded as the rent. In the grain-rented districts of Oudh, which also pay crop cash rents, it has been found that the grain rate is generally 60 per cent. less than the cash rate. In Sítapur the accepted rates were, cash Rs. 5-7-6, grain Rs. 3-5-1 and with these may be compared the recorded rates in this district and in Sítapur.

				Cash rate. Rs.	Grain rate. Rs.
Bijnor	...	...	...	5 8 4	3 1 7
Sítapur	...	...	...	5 14 6	3 5 9

Under a system of cash crop rents, labour and manure are concentrated by the tenants on the crop-rented fields and careless cultivation is inseparable from a system of division of the produce.

10. That on the whole the villages now grain-rented are inferior to the cash-rented villages is proved by the incidence of the circle rates. It is Rs. 5-1-7 on the cash-rented lands and Rs. 4-7-4 on the grain-rented lands. The circle rates have been shown to be adequate for cash-rented land, and as applied to grain-rented areas they are full. The valuation rate of Rs. 4-7-9 properly takes account of the cash crop rents which are paid on the grain-rented area, and of some understatement of the recorded grain rents, but it cannot be considered as other than a very full rate.

11. The cultivated area in the year of verification was 432,139 acres or 2,730 acres more than at last settlement. But the area in holdings was 463,463 acres and the average cultivated area for the 5 years previous to the settlement was 460,000 acres. In some villages an addition was made to bring the assessed area up to the normal: in a few where the recorded area was too high to give a stable basis for assessment, a reduction was made. Fallow in holdings was generally assessed and the total area brought under assessment was 468,829 acres. Considering that much of this fallow was in grain-rented villages where it paid no rent, the estimate of cultivation is certainly a full one.

12. With an adequate valuation of land cultivated by proprietors, an addition of Rs. 11,730 for *sáyár* income and a concession of 11 per cent. on the rent of *str*, the net assets became Rs. 22,98,980 as shown in the table in paragraph 73. No allowances were required for improvements.

13. On these assets the revenue proposed by the Settlement Officer was Rs. 11,05,293; but for various reasons, especially in the parganas first assessed, reductions were made by the Commissioner, the Board and Government. The principal reasons for reduction were the necessity for caution in dealing with areas of sandy soil, and the existence of exceptionally high rentals which are not fully collected in ordinary years, or of high and not fully established *nakshi* leases. Allowance was made for the difficulty in maintaining a high area of cultivation in villages which have no homestead and for the general inferiority of the produce in such villages. A more liberal concession was granted in the assessment of land cultivated by poor and numerous coparcenary communities. In these ways the revenue was reduced by Rs. 38,366, representing a rental of Rs. 76,732, and the final demand as now reported by the Settlement Officer is Rs. 10,66,927.

14. This demand takes 46.41 per cent. of the net assets, but it would be a mistake to suppose that the settlement was pitched at less than half assets. In a few cases, no doubt, less than half assets were taken in order to mitigate an excessive enhancement, but generally the reductions made by superior authority were practically a revised estimate of the assets and the real net assets of the tract probably do not exceed 22 lakhs.

15. The revenue incidence on the cultivated area is Rs. 2-7-6, but on the area assessed it is Rs. 2-4-5 as compared with Rs. 2-3-5 in the canal irrigated district of Muzaffarnagar and Rs. 1-13-4 in the Sitapur district. With this incidence of Rs. 2-4-5 may be compared the rate of the recorded tenants' rental, Rs. 4-9-3.

16. The assessment of individual maháls has been made with great care and consideration and while the assessment as a whole must be held to be fully adequate, the absence of appeals shows that it has been accepted by the different landholders as just to them. There is no reason to anticipate that owing to fall in prices it will become excessive, but Bijnor depends for its prosperity on sugarcane, and as Mr. Pert remarks in paragraph 54 of his report "any large decline in the area under cane would so seriously affect the rental assets that the collection of the newly revised revenue would of necessity be attended with much hardship and difficulty."

17. The settlement as now reported (paragraph 80 of the report) is recommended for the confirmation of Government for 30 years, the years of the expiry of the settlement to be—

Tahsil.

Bijnor.	}	30th June 1927.
Najibabad		
Dhampur	}	30th June 1928.
Nagina		

I have the honour to be,

SIR,

Your most obedient servant,

F. W. BROWNRIGG,

*Secretary.*





सत्यमेव जयते

FROM

H. Z. DARRAH, Esq., C. S.,

OFFICIATING COMMISSIONER, ROHILKHAND,

TO

THE SECRETARY, BOARD OF REVENUE,

NORTH-WESTERN PROVINCES AND OUDH.

*Dated 14th August 1899.*

SIR,

I HAVE the honour to forward herewith the Final Report of the Bijnor Settlement and to make the following remarks and comments.

2. The Bijnor district covers an area of 1877.64 square miles with a population of 794,070 or 422.5 per square mile. Two-thirds of this population are Hindus. The country is divided roughly into three natural divisions, a narrow alluvial tract along the Ganges, a wide stretch of central uplands and the forest belt from 2 to 10 miles in width running along the foot of the Garhwál hills. The central area is the only one of importance, the other two being largely uncultivated.

3. Owing to its proximity to the hills, its area of forest, and its numerous rivers and streams, Bijnor has a cool climate and a rainfall in excess of that of the neighbouring districts. It is natural therefore to find that irrigation is not as important a matter here as elsewhere. Masonry wells are never used for the crops and though three canals exist, these are all small and the area they protect is no more than 5 per cent. of the whole district.

4. The rental arrangements of the district are very peculiar and owing to the large extent of grain-rented land, over 54 per cent. of the total assets have been obtained by the application of assumed rates worked out by the Settlement Officer. On the resulting figures the assessments have been based and therefore the success or otherwise of the settlement depends mainly on the care with which the soils were demarcated and the applicability of the rates chosen. Consequently it becomes of the first importance to see in what manner the former operation has been carried out, how these rates have been obtained and what precautions have been adopted to prevent the danger of an excessive assessment.

5. The Settlement Officer in dealing with Bijnor had one considerable initial advantage in that the expiring settlement was admittedly a very lenient one and the revenue formed a very low proportion of the assets even when it was imposed. It was possible therefore for him not to assess up to the full half of the assets as allowed by the rules and at the same time to show a considerable rise over the figures of the expiring settlement. Of this assistance the report shows that full advantage was taken.

The demarcation appears to have been done with great care. The four natural soils—loam, clay, sandy loam and sand—appear to have been taken as the basis of classification here as in other districts, but the numerous sub-divisions of these adopted at some settlements were not attempted. After the patwári had entered up the soil classification of the previous settlement, correcting it where obviously wrong, the work was checked, field by field, by the supervisor kanúngos, whose classification was again checked by a trained demarcator. The maps by this time with the soil blocks inked in them passed into the hands of the officer in charge of the field work who finally passed the classification.



The demarcation may, I think, be regarded as having been carried out with the care which the large area (58·2 per cent. of the whole) to which assumed rates were applied undoubtedly required.

6. In grain-rented tracts the two systems of division on the threshing floor, (*batai*) and appraisement (*kankul*) both exist, but the whole of the crops even in these villages are not dealt with in this way. As a general rule sugarcane, cotton, chari, tobacco, vegetables and maize pay a fixed rate per unit of area instead of being subject to either division or appraisement. But as these rates depend on the crops and not on the land they are only indirectly of assistance in fixing soil rates. "All-round cash rents are" Mr. Pert says "practically unknown" and rents independent of the crops grown appear to be only of recent institution and to consist mainly in contracts given by landlords for the right to collect rents in the usual way from the villagers. The peculiarity about these contracts known as "nakshi leases" consists in the fact that after their termination the right of the landlord to return to grain rents is universally admitted. Consequently it is no unusual thing to find grain rents the custom in a tract in which cash rents of the kind indicated above are shown by the papers to have existed some time before.

7. This being the condition of things the Settlement Officer had no easy task set him to work out cash rent rates for the different soils which the maps showed. The manner in which this, the second most important task in connection with the working out of settlement assets, was done is thus described by Mr. Pert :—

"In the earlier parganas the rates for each soil were arrived at from the total cash-rented after deducting all fraudulent, inadequate or excessive rentals by a purely mathematical calculation; the ratio of the rental values of the various soils being obtained from a consideration of the average rent per acre of holdings, either of one kind of soil or which contained over 90 per cent. of one kind of soil."

"After further experience this method was more elaborated and differential soil rates were obtained village by village by analysing the various holdings, and with their assistance and the assistance of rates obtained by the previous method, standard circle rates were selected for each soil, which satisfied the test which the rules under which the settlement has been conducted lay down."

It is clear from this description that much depended on the sagacity of the officer dealing with the figures, and that a considerable amount of application of tentative rates was necessary before any final results could be tabulated. That this process was carried through with considerable care, and that both the demarcation and soil rates must have been made to approximate closely to actual facts is, I think, satisfactorily proved by the considerations to which Mr. Pert invites attention. The more important of these are noted below.

8. The general correctness of the demarcation is, I think well brought out by the figures showing the classification of the grain and cash-rented lands. Although in Bijnor it is generally admitted that owing to the manner in which cash and grain rents alternate with each other in successive years, cash-rented villages are not markedly superior to those paying rent in kind, yet the latter are somewhat poorer in the better classes of soils, as naturally the custom of payment in grain will linger longest in the more precarious tracts. This slight inferiority is exhibited by the demarcation figures, which show the following relative percentage for each of the four main classes of soil :—

Description.			Sawai.	Matyar.	Bhur Sawai.	Bhur.
Cash-rented	...	...	54·4	21·01	14·32	10·27
Grain-rented	...	...	47·78	20·81	15·36	10·05

This is even more marked in tahsil Bijnor in which the great majority of the precarious soils are found :—

Description.	Sawai.	Matiyar.	Bhur Sawai.	Bhur.
Cash-rented ... ..	46.6	7.95	22.37	23.8
Grain-rented ... ..	31.02	9.61	26.15	33.12

9. That the assumed rates are decidedly moderate is shown by several considerations.

In the first place we find that the incidence of the recorded cash rent on the recorded cash area comes to Rs. 5-5-7 per acre, whereas if the standard rates be applied to the same area, the total rental works out to an incidence of Rs. 5-1-7. Also out of the total area with recorded cash rents, a certain small percentage had to be rejected on account of fraudulent or fictitious rents and on the remainder the accepted rental gives an incidence of Rs. 5-5-10, whereas the standard rates for the same tract yield an average rate of Rs. 5-2-2.

10. In the second place the figures for villages grain-rented at settlement, but formerly held on *nakshi* leases bear out the same contention. The total area of these amounted to 54,963 acres, and the incidence of the former cash rent of this area was Rs. 5-7-7 per acre. Applying standard rates the average sinks to Rs. 5-2-1 per acre, showing that these assumed rates give a rental less than that which had formerly been actually paid for this land.

Moreover if this area be added to that held under cash rents, the total for which the rent is known comes to nearly 51 per cent. of the whole assessed tract, showing that the area to which assumed rates had really to be applied is less than that from an analysis of the cash rents of which these assumed rates have been worked out.

11. In the third place the application of the assumed rates to the grain-rented area, brings out an average incidence of only Rs. 4-7-9 per acre, as compared with an average of Rs. 5-5-7 for cash-rented lands. It is natural, as explained in paragraph 8 above, that the average rate on grain-rented land should be less than that on cash-rented, but the statements in the same paragraph will show that the difference in value is not very marked between these two classes of villages whereas the difference in the average rent rate is very great indeed. I draw from this the inference that the assumed rates have been worked out with moderation and the demarcation done with much care.

12. Looking to the final results obtained from the application of these assumed rates to the areas so demarcated, several considerations lead to the belief that the revenue assessed is as a whole very moderate. In the first place it should be remembered that the area under cultivation in the years of record appears to have been purposely reduced with a view to the settlement. For in the five years preceding settlement the average cultivated area was about 460,000, whereas in the year of record it had fallen to 432,139. It is fair, therefore, to assume that had the cultivated area been up to the average of preceding years the assessable area would have been a good deal higher than it was taken at, and that the revenue assessed was based therefore on figures representing less than the normal assets of the district.

13. In the second place attention should be drawn to the fact that although the total assessment involves an increase of 30 per cent. on the expiring settlement; this increase will not really be reached till the 11th year after the declaration of the *jamas*. For the first five years the percentage of increase is 19.9. During the second five, the assessment taken will exceed that of the expiring settlement by 27.3 per cent.

14. In his paragraphs 50-54 Mr. Pert estimates that a rise in prices of 40 per cent. has caused a rise in rents of over 30 per cent. Even if the exact accuracy of these figures be doubted, the proof adduced shows that the rise cannot have been much below what is stated. If we even take the rise in rents at only 25 per cent. it will be seen that the rise in revenue does not come up to this. For the incidence of the new revenue per assessed acre is Rs. 2-4-5 and that of the expiring settlement Rs. 1-14-7, or an increase of 19 per cent. It is, therefore clear, that a smaller proportion of the gross assets is now being taken than was the case at the settlement just closing—another testimony to the moderation with which the work has been done, for it is admitted on all sides that Mr. Markham's assessments were decidedly lenient.

15. Besides the impression of careful moderation as far as general results are concerned produced by the preceding considerations, there is evidence of studied moderation with reference to special estates in Mr. Pert's paragraph 78, where he gives details of the assets and assessment of 26 of the largest properties in Bijnor. The average for these is an assessment of 46·5 per cent. on assets, and in all but five (in one of which the jama was lowered) the severity of the enhancement has been discounted by progressive revenues.

16. In his paragraph 77 Mr. Pert draws an interesting comparison between Muzaffarnagar and Bijnor greatly in favour of the lightness of assessment in the latter district. He shows that though Bijnor has an average rent rate of Rs. 5-5-8 for the cash-paying area as compared with one of Rs. 4-12-4 in Muzaffarnagar, the incidence per assessed acre of the revised revenue in the former district is Rs. 2-4-5 and in the latter Rs. 2-3-5. That is that the revenue incidence of Bijnor is only one anna per acre higher than in Muzaffarnagar, whereas the rental incidence on the cash area is over nine annas higher.

17. On the whole, therefore, judging from the above view of the facts, I am disposed to think that the assessment, as proposed, Rs. 10,66,927 on corrected net assets amounting to Rs. 22,98,980 is one which is amply justified by the figures. It appears to have been worked out with much care and every thing in Mr. Pert's report goes to show that the enhancement has been kept below what might on the figures have been very easily claimed. I would therefore recommend it for confirmation.

I have the honour to be,

SIR,

Your most obedient servant,

H. Z. DARRAH,

*Officiating Commissioner.*

# TABLE OF CONTENTS.

## CHAPTER I.

### GENERAL DESCRIPTION OF THE DISTRICT.

PARA.		PAGE.
1.	Position, boundaries, and area...	1
2.	Physical features. The Chandi hills	<i>ib.</i>
3.	The forest	<i>ib.</i>
4.	The open country	<i>ib.</i>
5.	The lowlands	<i>ib.</i>
6.	The uplands ; the western uplands	2
7.	The central uplands	<i>ib.</i>
8.	The eastern uplands	<i>ib.</i>
9.	The Afzalgarh tract	2 & 3
10.	Drainage	3
11.	Climate and rainfall	<i>ib.</i>
12.	Irrigation	<i>ib.</i>
13.	Communications	4
14.	Population	<i>ib.</i>
15.	Trade and manufactures	4 & 5
16.	Towns and markets...	5
17—23.	Rental customs	5 & 6
24.	Class and caste rents	6
25.	System of agriculture	6 & 7

## CHAPTER II.

### FISCAL HISTORY OF THE DISTRICT.

26.	The early Settlements	7
27.	The ninth Settlement	<i>ib.</i>
28.	The tenth Settlement ; assessing officers and the work carried out by them	8
29.	Inadequacy of the Burpur and other rates and of the assessments made by Messrs. Palmer and Carpenter,	<i>ib.</i>
30.	Partly confirmed by present experience	<i>ib.</i>
31.	Changes in the 10th Settlement after assessment	8 & 9
32.	Working of the 10th Settlement	9
33.	Transfers of proprietary rights...	10

## CHAPTER III.

### COMPARISON OF THE PAST AND PRESENT CONDITIONS OF THE TRACT UNDER REPORT.

34.	Area statistics	10
35.	The non-assessable area : Revenue-free area	<i>ib.</i>
36.	Ditto ditto : Other non-assessable areas,	11
37.	The assessable area : Groves	<i>ib.</i>
38.	Ditto : Culturable waste, old and new fallows	<i>ib.</i>
39.	Ditto : The cultivated area	<i>ib.</i>
40.	Irrigation	11 & 12
41.	Crop statistics	12 & 13
42.	Proprietary tenures...	13
43.	Caste of proprietors...	13 & 14
44.	Condition of proprietors	14
45.	Cultivating tenures : Sir and khudkasht	<i>ib.</i>
46.	Occupancy tenure	14 & 15
47, 48 & 49.	Caste and condition of tenants...	15 & 16
50.	Comparison of former and present rents	16
51.	Causes affecting the rise in rents	16 & 17
52, 53 & 54.	The rise in prices	17 & 18

PARA.		PAGE.
<b>CHAPTER IV.</b>		
<b>PROCEEDINGS PRELIMINARY TO ASSESSMENT.</b>		
55.	Enquiry previous to Settlement...	18
56.	Commencement of Settlement operations ...	18 & 19
57.	The maps ...	19
58.	The Khasras, Khewats and Jamabandis ...	<i>ib.</i>
59.	Attestation of Jamabandis dispensed with ...	<i>ib.</i>
60.	Soil classification ...	19 & 20
61.	Demarcation of soils ...	20
62.	Formation of circles ...	<i>ib.</i>
63.	Selection of standard circle rates ...	20 & 21
64.	Separate rates for occupancy land ...	21
65.	Comparison with actual rents ...	<i>ib.</i>
66.	Their application as a basis of valuation to the assumption areas ...	21 & 22
<b>CHAPTER V.</b>		
<b>ASSESSMENT OF THE REVENUE AND ITS INCIDENCE.</b>		
67.	The assessed area ...	23
68.	Correction of rent-rolls ...	<i>ib.</i>
69.	The corrected rent-roll ...	23 & 24
70.	Additions to and deductions from the rent-roll ...	24
71.	Sir allowance ...	<i>ib.</i>
72.	Allowance for improvements ...	<i>ib.</i>
73.	The net assets ...	<i>ib.</i>
74.	The revenue assessed ...	24 & 25
75.	Progressive assessments ...	25
76.	Percentage of assets taken ...	<i>ib.</i>
77.	Incidence of the new revenue ...	25 & 26
78.	Results of the assessment on the large land-holders ...	26 & 27
79.	Causes of the enhancement ...	27
80.	Period of Settlement ...	<i>ib.</i>
81.	Working of the new assessments ...	<i>ib.</i>
<b>CHAPTER VI.</b>		
<b>MISCELLANEOUS.</b>		
82.	Alluvial maháls ...	27
83.	Other work carried out by the Settlement Department, ...	28
84.	Litigation ...	<i>ib.</i>
85.	Appeals to Settlement Officer ...	<i>ib.</i>
86.	Objections against assessment ...	<i>ib.</i>
87.	Dates on which assessment reports were submitted ...	28 & 29
88.	Cost of operations ...	29
89.	Cost of record work and assessment ...	29 & 30
90.	Services of officers ...	30
91.	The Assistant Settlement Officer ...	<i>ib.</i>
92.	The Deputy Collectors ...	<i>ib.</i>
93.	Subordinate staff ...	<i>ib.</i>
	Appendices I to IX ...	31 to 36

# Final Settlement Report of the Bijnor District.

## CHAPTER I.

### GENERAL DESCRIPTION OF THE DISTRICT.

1. The district of Bijnor, one of the most northerly of the districts of the North-West Provinces, is situated in the tract of country included between latitudes 29° and 30°N, and longitudes 78° and 79°E. It is roughly triangular in shape, and is bounded on the west by the river Ganges, which separates it from the districts of Dehra Dún, Saháranpur, Muzaffarnagar and Meerut, on the north-east, by the Kandi Sarak, a submontane road, which separates it from the district of Garhwál, and on the south-east, by the districts of Naini Tal and Moradabad. The changes in the boundaries during the past thirty years have been few and unimportant. The Kandi Sarak has been lately transferred to Garhwál, and some minor changes have been caused by the action of the rivers Ganges and Ramganga, the villages of Chakheri and Bannuwala having been transferred to the district of Muzaffarnagar, and a portion of the village of Ismailpur Salah to the district of Moradabad. The district is divided into four tahsils and fifteen parganas, and its total area according to the latest figures is 1877·64 square miles.

Position, boundaries  
and area.

2. Its extreme northern corner is covered with a series of low hills, apparently an outlying spur of the Garhwál range, and locally known as the Chandi hills. They cover some 25 square miles in area, are uninhabited and uncultivated, and, except in the valleys, and on the lower slopes, where clumps of bamboos and a few trees are found, are little more than rugged and barren rocks. Their whole area is situated within the limits of the Government reserved forest of Chandi.

Physical features. The  
Chandi hills.

3. Extending from these hills to the Naini Tal district, the whole of the north-east border consists of a broad belt of forest, which as a rule varies from some two to ten miles in width. On the extreme east lies the Rehar Forest, another Government Reserve, some 24½ square miles in area, consisting almost entirely of valuable sal plantations. (*Shorea robusta*). Across this belt, which slopes considerably to the south and south-west, flow the numerous rivers and streams which issue from the neighbouring Garhwál hills, and except in the valleys spreading out on either side of the larger rivers, the surface is very irregular and much broken up by ravines and surface drainage channels. Large clearances of forest have been made since last Settlement, and in a few villages cultivation is now continuous up to the Kandi Sarak. The soil is everywhere good, rich and moist in the valleys, and, though lighter on the uplands, is there capable of bearing excellent crops, except in years of seriously deficient rainfall. The climate, however, is unhealthy, the population scanty, much damage is done to the crops by the numerous wild animals frequenting the forest, and, owing to these injurious influences cultivation is precarious, and the rental capacity of the land low. There has nevertheless been a considerable improvement, the large clearances having proved very beneficial to the now further removed villages, and, but for the exceptional nature of the years preceding Settlement, and the neglect which the forest tract has lately received, the improvement, especially in Afzalgarh and Barhapura, would have been much more marked.

The forest.

4. The open country which forms the remaining and by far the greater portion of the district comprises the valleys of the Ganges, Malin, Khoh and Ramganga, the uplands between the Ganges on the one side and the rivers Khoh and Ramganga on the other, and the quasi-alluvial tract of Afzalgarh.

The open country.

5. The valleys of the four large rivers, though varying somewhat in fertility, present very much the same characteristics. The actual bed of the river is little more than marsh or sand, and what cultivation there is, is found on the edges of the dry season level of the river, on soil which is annually swept by the rainy season

The lowlands.

floods and which is constantly varying with the river's action. Further inland, but separated from the river bed by sharp banks sufficiently high in ordinary years to prevent any injury by flooding, the soil is a level stretch of alluvial loam and clay, which is separated from the higher ground of the uplands by a series of small swamps and marshes. Except in parganas Bashta and Mandawur on the bank of the Ganges, where the soil is of much more recent deposit, and in pargana Afzalgarh on both sides of the Ramganga, where the capricious course of the river and its proximity to the forest interfere with successful cultivation, this upper khadir is a fertile and closely cultivated tract which contains some of the richest lands in the district, and suffers little from the vicissitudes of the seasons.

The uplands.

The western uplands.

6. Situated between the valleys of the Ganges and of the combined Khoh and Ramganga rivers, the Bijoor uplands are naturally divided into three parallel belts running roughly north and south, the western, the central and the eastern uplands. The western uplands, the natural watershed between the valley of the Ganges and the central drainage lines of the district, consist of a broad and undulating stretch of sandy soil running parallel to the Ganges through which at some remote period the rivers Malin and Choiya have cut their way. The three portions into which this tract is thus divided form a series of low sandy ridges running generally parallel to the Ganges, and separated by broad and level plains, which gradually slope down on all sides into the surrounding valleys. Except in the neighbourhood of the ridges, the soil, though containing a considerable admixture of sand, is largely a fair loam, passing occasionally into the hardened soil commonly spoken of as clay. The ridges and the slopes leading to them, however, are little more than pure sand, and though, largely cultivated, require constant successions of long fallows. The tract is sparsely populated, one harvest as a rule can only be obtained, water is at a considerable distance from the surface and, as little artificial irrigation can be carried out, it is entirely dependent on good and seasonable rains.

The central uplands.

7. East of this watershed the country slopes gradually downwards into a broad lowlying belt traversing the whole of the central portion of the district, through which the rivers Bán, Gangan and Karula flow, following the general slope of the country from north to south. These rivers all rise in the north of the tract and form its natural drainage channels. The soil is largely a soft friable loam, containing a slight admixture of sand, which in depressions and along drainage lines passes into a hard and stiff clay, and with hardly any exception it is all of good quality. An additional feature of this tract is its exceptional facilities for irrigation. It is traversed both by the Khoh and the Gangan canals, water is found so close to the surface that kucha wells can be dug with ease in all parts, and in the southern portion, the subsoil is so firm that these wells can be worked by a *charas* instead of by the usual lever lift. Around the Ban and its tributaries in years of heavy rain some injury is caused by floods, but, taking it all round, the tract ranks higher in agricultural value than any other part of the district, save the rich alluvial deposits of the larger rivers. It is thickly populated and highly cultivated and is practically free from any serious injury from drought.

The eastern uplands.

8. Further east beyond the Karula the country again changes in character, rising into the watershed between the valleys of the Khoh and Ramganga and the central uplands. This tract forms a comparatively narrow belt extending from the Nagina tahsil to the southern border of the district. A little sand is generally prevalent in the soil, but nowhere to the extent in which it is found in the western uplands, the surface though irregular is fairly level, and the soil a good loam passing in depressions into a stiffish clay. The centre of the tract is traversed by the Ekra channel. It is closely populated owing to the numerous towns on its eastern edge overlooking the Khoh and the Ramganga valleys and under the stimulus supplied by the presence of the Oudh and Rohilkhand Railway it has shown considerable development.

The Afzalgarh tract.

9. The Afzalgarh tract lies to the east of the Ramganga river. It is quasi-alluvial in character, consisting of a fertile loam and clay, and is somewhat akin to

the tarāi in the neighbouring district of Naini Tal. Surrounded by dense forest on the north and east, and bounded on the west by the Ramganga, it is generally very unhealthy, and owing to the late succession of rainy years, all but its central and southern portions, have suffered largely from mortality both among men and cattle.

10. The considerable slope of the country generally prevents any serious interference with the drainage and the district is, on the whole well provided with natural drainage channels in the numerous rivers and streams which cross it. There are, however, in parts of the lowlying central uplands and in the valleys of the larger rivers, a few places where the drainage is impeded, and in some of these the drainage system appears capable of improvement. Along the foot of the uplands in the Ganges, Khoh and Ramganga valleys the old courses of those rivers are marked by a series of small swamps and marshes which receive a considerable portion of the drainage of the neighbouring uplands, and except in parganas Bashta and Mandawnr, where the swamps are extensive and continuous, considerable areas could probably be reclaimed by a simple system of drainage cuts into their respective rivers. In years of heavy rainfall the river Ban and its numerous channels, owing to the silting up of its bed and in some cases to temporary irrigation dams, is unable to do the work demanded of it, and considerable inundations follow, which render the cultivation of crops in its neighbourhood very precarious. The deepening of its bed and the prohibition of the irrigation dams would do much to relieve the villages around it, but it is questionable whether this would not deprive the higher lands of the moisture which now enables them in ordinary years to grow and bring to perfection almost any crop without artificial irrigation.

Drainage.

11. From its proximity to the hills, its large extent of forest, and its numerous rivers and streams, Bijnor has naturally a cool climate, its mean annual temperature being about 75°, while the real cold season extends from the 15th October to the 15th April, and both among Europeans and natives it has long enjoyed the reputation of being one of the healthiest districts in the plains. In the north and east, however, owing to the presence of the forest, the climate, both during and for some time after the rains, is most unhealthy, and in the centre of the district and in the numerous river valleys malarial fevers are exceedingly prevalent. Omitting the years previous to the establishment of rain gauges in the various tahsils the

Climate and rainfall.

		Mean annual rainfall for the past 35 years 1864-98
District.	Mean annual rainfall.	is 41.05 inches, a fall which, as will be seen from the
Sahāranpur ..	... 35.60	figures on the margin, is much in excess of that of
Muzaffarnagar	... 31.30	the neighbouring districts of the plains. During
Meerut ...	... 27.47	these 35 years, 27 have been years of very fair or
Moradabad ...	... 40.47	average rainfall, the variations not exceeding 25 per cent., four have been years

of excess and only four years of abnormal deficit. It will thus be seen that both in the extent and regularity of its rainfall the district possesses considerable natural advantages.

12. Under these circumstances it is not surprising to find that irrigation has hitherto proved but a small and unimportant factor in the economy of the greater portion of the district. Masonry wells are practically never used for field irrigation, being solely constructed for drinking or garden purposes; and the only permanent sources of irrigation are the small Khoh, Gangan and Malin canals. These small canals, the former two of which are managed by the Canal Department, the latter being purely a private enterprise, irrigate only portions of parganas Dhampur and Nagina, and a few odd villages in parganas Najibabad, Akbarabad and Barpur and as the area protected by them does not amount to more than 5 per cent. of the whole area of the district, their influence is entirely a local one. Some irrigation is also carried out from the river Rawasan in the extreme north of the district, from the Gangan below Morna, and from the Katheni, a tributary of the Gangan, while a little water is obtained in years of need from the numerous rivers that intersect the district.

Irrigation.



The remaining sources are kucha wells—rough shafts constructed down to the water bearing stratum—and tanks, which serve only to tide over the dry months before the breaking of the rains, or to irrigate the rabi crops, in the event of prolonged drought during the winter season. Kucha wells can be constructed in all save the high upland portions of the district, but it is only in tahsil Dhampur that the irrigation from them has attained any considerable extent, and even here it is of such a temporary character that no differential rates for irrigated and non-irrigated lands exist.

Communications.

13. At last settlement the foremost want of the district was improved communications, and although since then it has been partly opened out by the construction of the Oudh and Rohilkhand Railway, its external and internal communications are still capable of considerable improvement. The Oudh and Rohilkhand Railway follows closely as far as Najibabad, the alignment of the old pilgrim road from Moradabad to Hardwar and from there turning sharply to the west, crosses the Ganges at Balawali. There are 10 stations in the district, and since January 1897 a small branch line from Najibabad to Kotdwar has also been opened to traffic. Of metalled roads there are only 29 miles, and although besides these, there are 113 miles of raised but unmetalled roads, and 489 miles of kucha roads, maintained by the District Board, and many hundred miles of village cart tracks, this wealth of communication, as Mr. Markham remarked at last settlement, is to a large extent illusory, as the majority of the roads are unbridged and many of them after a heavy fall of rain are practically impassable for wheeled traffic. Communications are particularly bad in parganas Afzalgarh, Najibabad, Barhapura and Mandawur and the inferiority and low rentals of the latter pargana are largely to be attributed to its inaccessibility. The difficulties of making good roads in Bijnor, and what is of equal importance, of keeping them in order are undoubtedly exceptional. No kankar can be obtained within the district, the country is crossed by numerous rivers and streams, most of them liable to sudden and heavy floods, a great portion is lowlying and the western uplands are very sandy, but notwithstanding these difficulties now that the revenue demand of the district has been considerably enhanced, the importance of connecting the western, central and forest parganas by good roads with the railway line cannot be too strongly urged.

Population.

14. At last settlement in 1872 the total population of the district was 737,152. At the census of 1881 it had declined to 721,450 largely owing to the 1877-8 famine but in 1891 it had again increased to 794,070 or 422.5 per square mile. The density varies considerably in the different tahsils, being 416 in Bijnor, 342 in Najibabad, 381 in Nagina and 552 in Dhampur. Of the total area of the district, however, 300 square miles at least, are uninhabited forest, and deducting this area, the density of the inhabitable portion is quite 500 per square mile. Bijnor is thus by no means underpopulated and even excluding the inhabitants of the large cities and towns the density of the rural population is as much as 400 per square mile. As at last settlement, Hindus outnumber Muhammadans roughly in the proportion of 2 to 1, the exact figures being 65.72 per cent. Hindus, 33.65 per cent. Muhammadans, the remaining .63 per cent. consisting of Christians and others. Of the total population some 60 per cent. are represented as depending entirely on agriculture for their subsistence; but these figures considerably understate the truth as whenever a secondary occupation was given at the census the entry of agriculture was not made.

Trade and manufactures.

15. There are few manufactures of any but local importance. Among them may be mentioned the carved ebony work and glass ware of Nagina, the *janeos* (or sacred threads) and pocket knives of Bijnor, the papier-maché articles of Mandawur and the bellmetal vessels of Sahanpur and Najibabad.

Practically the whole of the trade is in agricultural produce, of which sugar is by far the most important. Prior to 1889 this traffic found its way across the Ganges to Meerut and Muzaffarnagar centres; but since the opening of the Oudh and Rohilkhand Railway it has largely been diverted, and the rail-borne traffic now roughly represents about four-fifths of the whole. For the last eight years the

average exports by rail have amounted to 710,859 maunds, of which 687,579 maunds, valued at 23½ lakhs of rupees, were sugar in its various forms. In return for this sugar the district receives chiefly food grains, salt, and European piece goods, the two former being largely imported from the Panjáb.

16. On the whole the district is well provided with large towns and markets.

<i>Town.</i>	<i>Population.</i>	<i>Rs.</i>
Sherkot	...	15,589
Kiratpur	...	14,823
Nehtor	...	10,811
Seohara	...	9,465
Afzalgarh	...	8,441
Mandawar	...	7,346
Jhalu	...	5,672
Rehar	...	4,419
Daranagar	...	3,163

There are five municipalities—Nagina with 22,150 inhabitants, Najibabad with 19,410, Bijnor with 16,236, Chandpur with 12,256, and Dhampur with 6,708, while the Chaunkidari Act is in force in the nine towns noted on the margin. In addition to the bazars and markets held in these towns, there are in each pargana numerous villages of considerable size, where weekly and bi-weekly markets are held for the purpose of supplying the ordinary wants of the people, the most important of which are Haldaur, Barhapura, Tajpur, Pheona, Kasimpur Garhi, Kotkadir and Sahispur.

Towns and markets.

17. The rental arrangements of the district are somewhat complicated. A large proportion of the cultivators, very often of whole villages, pay rents in kind either by actual division of the grain on the threshing-floor (batai) or by appraisement before cutting (kankut, amaldari), in which case the landlord may take payment either in money by a cash valuation of his share as appraised or in kind on harvesting according to his share of the outturn as estimated at appraisement. Wherever this custom of payment in kind prevails, certain crops are generally exempted from appraisement or division, and in the majority of villages sugarcane, cotton, chari, munda crops or crops sown immediately after a cane crop, tobacco, vegetables, melons, and occasionally pepper, maize, and urd, pay a fixed cash rate per unit of area known by the name of zabti.

Rental customs.

Grain rents.

Batai, Kankut Amaldari.

Zabti.

18. The amount of the landlord's share of the nijkari or grain rented crops bears as a rule little relation to the village, depending largely on the power of the landlord and on custom, though broadly it may be said that the richer tracts pay the larger share. It varies from 10 seers per maund in the precarious alluvial and forest tracts to 21 and 22 seers in the richer ones, but is commonly 20 seers.

Nijkari rates.

19. The special crop rates similarly bear little relation to the village, though they roughly follow the value of the various tracts. In former years it was customary for the landlord to give a rebate of one-tenth known as nabud on the zabti rental of cane and cotton as an allowance in case of over-measurement; but though still existing in many parts of the district, it has of late years been gradually discontinued. The zabti rates for cane vary from Rs. 43-3-2 per acre to Rs. 4-6-9, and on the average are about Rs. 20; for cotton and munda crops from Rs. 15-3-2 to Re. 1-3-2, and on the average about Rs 7; for chari from Rs. 11-8-0 to Re. 0-13-7, and on the average about Rs. 4, and for other crops such as melons, vegetables and garden crops are about Rs. 12 per acre.

Zabti rates.

Nabud.

In connection with these rates it is necessary to point out that the high rate for cane really corresponds to the ordinary cash rental for two years, owing to the fact that it is usually necessary to keep the land fallow for a whole year before cane is sown. Instead, however, of keeping the land fallow for a whole year, the tenant sometimes sows a crop in the kharif season: but as this is done at the risk of the succeeding cane crop, it has generally been customary for the landlord to allow the tenant to take the whole crop. This practice of sowing one crop in the pandra (as land which lies fallow for cane is called) has of late years come more and more into vogue and the more powerful landlords have successfully asserted their claim to a share of the extra crop.

The sugar-cane rate.

Dofasli pandra.

20. All round cash rents are practically unknown, existing only in a few forest villages and, even there, they generally take the form of a special rate per unit of area for grain rented crops, the zabti rates on the special crops remaining unchanged. True cash rents or rents independent of the crop grown, are a comparatively recent institution, and so far have never gone beyond lump cash payments,

Cash rents.

Ordinary leases.

The first step in their introduction appears to have been for the landlord to lease his right of collecting the zabti and kind rents to one or more of the leading members of the community or to outsiders, and these lessees collected the rents from the cultivators according to the usual custom of the village.

Nakshi leases.

21. The next step was for the landlord to agree with the whole cultivating community to receive a certain lump sum of money from them in lieu of his share of the produce of the village or patti. These agreements were for a fixed period, and the landlord's right to revert to grain rents on their expiration was and is universally recognized and acted on. Known by the name of nakshi leases, they are generally accepted by the leading members of the community on behalf of the remainder, and are then divided up among the various cultivating members in some rough and ready manner. In some few cases the landlord himself, as in the Tajpur estate, assists in the fixation of the amount the various holdings should pay, but the distribution is far more commonly carried out by the cultivators themselves with the aid of the village patwari.

22. As these so-called leases have been a fruitful source of confusion, and at times of unintentional injustice in the Revenue Courts, it is important to note that generally they are merely agreements as to the way in which the rent is to be paid to the landlord, and that therefore ejectment from these leases should not carry with it ejectment from the land, unless it is clear that at the time of accepting the lease the lessee's status was such that the acceptance of the lease created a new tenancy.

23. Following on these nakshi leases to the community as a whole, a further step towards cash rents was for the landlord to agree separately with each cultivator for a lump cash payment in lieu of his share of the produce of the holding. This is as far as the development has gone, and all these arrangements and variations of them are found existing side by side.

The great majority of the present cash rents, therefore, and of the cash rents recorded at last settlement, are merely these separate lump cash payments whether agreed to on a nakshi lease or individually, which, owing to the fact that the period agreed on had not expired at attestation, have been verified by the landlords and tenants, and have been consequently recorded in the village papers. With the exception of a few rents, which were commuted at last settlement and others which have become stereotyped as it were by the landlord allowing his right to revert to grain rents to slide, there is no permanence whatever about these rents, and a year after attestation, if the period agreed on has expired, the cultivators may revert to payments in kind either at their own wish or by the will of the landlord.

Class and caste rents.

24. As a rule the same rate of batai, kankut and zabti is paid by all classes and castes of tenants, and wherever differences in rates exist, it will generally be found that unless some conditions of service are attached, the lower rates are paid by the descendants of old dispossessed proprietors or of old resident tenants.

As, however, these rates were determined long before the present law came into force there is little correspondence between the tenants paying these low rents and the present ex-proprietary and occupancy tenants, and generally speaking in grain rented villages occupancy and non-occupancy tenants pay the same rates of rent.

There is similarly little difference in the lump cash payments, most of which have been evolved from calculations based on the value of the share received in kind and by zabti rates, and it is owing to these circumstances that separate standard rates for occupancy and non-occupancy lands have not been found necessary.

System of agriculture.

25. There is very little to be said of the system of cultivation in Bijnor which is very similar to that of the surrounding districts. As in the adjoining district of Muzaffarnagar cultivation is extended to all the good land in the village, and no special attention is paid to the land in the immediate neighbourhood of the homestead except by tenants of the market gardener class. Cane is by far the most important crop, and to it is devoted all the manure obtainable from the village cattle or refuse heap. In the general absence of irrigation, little use can be found for liquid manures, and for want of the necessary capital no attempt has been made to utilize

artificial ones. But though there has been little or no change in the methods of cultivation, the figures of the crop statement for the tract under report, which roughly represents the whole district, shows a very considerable extension of the area under superior crops, and of the double cropped area, pointing to a real improvement, and the readiness with which the people have since last settlement entirely adopted the iron sugar press in place of the old fashioned wooden kolhu shows how keenly alive they are to any improvements which are within their small means.

## CHAPTER II.

### FISCAL HISTORY OF THE DISTRICT.

26. The district of Bijnor, then known as the northern division of Moradabad, was ceded to the East India Company in November 1801, its first settlement being carried out in 1802-3. Between that year and 1831, when the district was first regularly and systematically assessed, eight summary revisions took place. The first regular assessment was thus the ninth in order and is commonly described as the 9th settlement. Prior to this 9th settlement no official data regarding the previous settlements seem to have been extant, and the following statement merely embodies the few facts and figures that Mr. Markham at the 10th settlement was able to gather together :—

The early settlements.

Name of settlement.	Period.	Revenue.	Name of assessing officers.	Remarks as to character of settlement.
I	1802-3 to 1804-5	9,14,931	Mr. Lyecester.	Said to have been easily collected.
II	1805-6 to 1807-8	9,21,292	ditto.	An extension of the 1st with a few alterations. Easily collected.
III	1808-9 to 1811-2	9,70,464	Messrs. Lloyd, Christian, and Law.	Severe and said to have pressed heavily in many parganas.
IV	1812-3 to 1816-17	11,02,808	Mr. Batson.	Very severe. Many m. lguzars were ruined and the settlement finally broke down.
V	1817-8 to 1821-2	10,89,138	Mr. Balderstone.	Said to have been easily paid.
VI	1822-3 to 1826-7	11,33,351	Mr. Hallid.	Said to have been heavy in Kiratpur and Nagina, but otherwise fair.
VII	1827-8 to 1831-2	11,34,436	Messrs. Grote Augustine and Hallid.	Collected without difficulty except in Nagina where it pressed heavily.
VIII	1832-3 to the years when 9th settlement was imposed.	11,35,286	Mr. Ravenshaw.	Said to have been heavy in Nagina, Kiratpur and Bashta.

27. The ninth settlement which is often styled the settlement of Regulation IX, as it was carried out under the provisions of Regulation IX of 1833, was made by Messrs. Lushington, Dick, Allen, and Trench. It was given out at varying periods between 1834 and 1839, and though at first sanctioned for twenty years, was finally extended for the whole of the district to the 30th June 1866. The demand amounted to Rs. 11,20,200 and fell on cultivation at a rate of Rs. 2-7-0 per acre.

The ninth settlement.

It appears to have been a generally expressed opinion that this settlement was at the time a very heavy one, and local opinion still corroborates this view. It was, however, considered by all the sanctioning authorities at the time of its imposition to be not only moderate, but in some parganas actually inadequate and in 1842 after the assessment had been in force for some years Mr. R. M. Bird the highest revenue authority of the time wrote "that although the object of equality of assessment" "had not been obtained the revenue assessed was regularly and easily collected." It certainly worked well, and there appears now to be little doubt that taken as a whole, the revenue when assessed was a moderate 66 per cent. of the assets, which owing to the considerable increase in cultivation (29.3 per cent.) a large part of it old established resumed revenue free cultivation and to the great rise in prices, had by the close of the ninth settlement become a moderate 50 per cent. of the real assets. Its reputed severity seems to have been wholly due to its serious inequality, and in many of the older established villages it would be impossible even now with the very great rise in prices that has taken place during the last sixty years, to maintain the demand of this settlement. The closing demand was Rs. 11,83,585 which fell on the then cultivation at a rate of Re. 1-15-11 per acre.

The tenth settlement.

Assessing officers and the work carried out by them.

28. The 10th or expiring settlement was carried out by Messrs. Palmer, Carpenter, and Markham. Its operations lasted from November 1863 to the middle of 1874, but the work of instructing patwāris with a view to their employment in survey work had been begun as early as 1859. The Collector of the district, Mr. Palmer was at first placed in charge of the operations; and with the assistance of Mr. Carpenter he assessed by the middle of 1868 the eleven parganas Bijnor Mundawur, Daranagar, Najibabad, Akbarabad, Kiratpur, Dhampur, Seohara, Nehtor, Afzalgarh and Barhapura, with the exception of certain forest villages in Najibabad, Afzalgarh and Barhapura.

In the middle of 1868, Mr. Palmer and Mr. Carpenter having left the district, Mr. Markham was placed in independent charge of the settlement, and upon him fell the duty of assessing the forest villages and the remaining four parganas, Chandpur, Burpur, Bashta and Nagina, for all of which standard rates had already been proposed and sanctioned.

Inadequacy of the Burpur and other rates and of the assessments made by Messrs. Palmer and Carpenter.

29. On starting the assessments of the four parganas, Mr. Markham came to the conclusion that the rates already proposed and sanctioned were much too low and he accordingly submitted his views to higher authorities for instructions. A long and somewhat controversial correspondence then ensued which in the end resulted in Mr. Markham being authorized to use rates considerably higher than those formerly proposed and sanctioned. In submitting the final report of the whole of the operations, further investigations with regard to the parganas already assessed having convinced him that the interests of Government had been needlessly sacrificed by the considerable reductions granted, Mr. Markham also recommended that the assessments of the whole district should not be sanctioned for a period of more than twenty years. The Local Government, however, while disposed to agree to some extent with Mr. Markham, recommended the confirmation of the whole of the assessments for thirty years and this recommendation was finally accepted by the Government of India.

Partly confirmed by present experience.

30. It is unnecessary at this length of time to refer in any detail to this impugnement by Mr. Markham of his predecessor's assessments. Apart from the fact that Mr. Markham's views were to some extent accepted at the time, there is little doubt that on the basis of the verified rent-rolls of 1274 and 1275 Fasli corresponding to 1866-67 and 1867-68 A.D., a considerable portion of the large enhancement it has now been found necessary to impose on many villages has been due to the unnecessary leniency at the tenth Settlement. But owing to the fact that Mr. Markham's figures were based partly on the details of years succeeding 1867-68 A.D., his conclusions appear to have been somewhat exaggerated, the apparent lightness of Messrs. Palmer and Carpenter's revenues being largely due to the considerable and gradual rise in prices which immediately followed the announcement of their assessments. The revision of the tenth Settlement resulted in a revenue demand of Rs. 11,83,029 or an enhancement of 3 per cent. on the old demand of Rs. 1,148,488, and fell on cultivation at an incidence of Rs. 2 per acre. The figures for the ninth Settlement differ from those given in paragraph 27 owing to several changes in the boundary of the district between the ninth and tenth Settlements.

Changes in the 10th settlement after assessment.

31. For the years between 1867-68 and 1874-75 during which as the current assessments became due, various sums were subtracted from or added to the revenue roll, it has been found impossible to trace the changes in the revenue. In 1874-75 when Mr. Markham's report was written the revenue of the whole district is there given as Rs. 11,83,029, and in the Collectorate records on the 1st October 1875 as Rs. 11,83,074. The difference of Rs. 45 cannot now be traced but it is probably due to small changes in the revenue, which occurred between the date of Mr. Markham's report and the 1st October 1875. Adopting therefore the figures of the Collectorate records from 1875-76 downwards the following statement gives a summary of the increase and decrease in the revenue down to the 1st October 1896:—

					Rs.	a.	p.	Rs.	a.	p.
Revenue on 1st October 1875	...	...	...	...	...	...	...	11,83,074	0	0
Increase by lapse or resumption of revenue free tenures	...	...	...	...	9,397	13	6			
By alluvion	...	...	...	...	8,544	4	3			
By grant of waste land	...	...	...	...	16	14	5			
By progressive assessments	...	...	...	...	1,949	10	10			
By land released from occupation by Government	...	...	...	...	639	4	0			
By groves	...	...	...	...	1,287	14	3			
By any other cause	...	...	...	...	1,018	0	0			
Total increase	...	...	...	...	22,853	13	3			
Decrease by summary reduction on account of over-assessment or any other cause	...	...	...	...	1,175	0	0			
By diluvian	...	...	...	...	15,991	12	9			
By territorial transfer	...	...	...	...	133	0	0			
By Government appropriation	...	...	...	...	2,991	12	3			
By abandonment of grants of waste land	...	...	...	...	1,914	13	1			
By groves	...	...	...	...	880	6	2			
By any other cause	...	...	...	...	1,213	14	7			
Total decrease	...	...	...	...	24,250	10	10			
Revenue on 1st October 1896	...	...	...	...				11,81,677	2	5

The only item which has any reference to the adequacy or otherwise of the present revenue is the one of Rs. 1,175, and as Rs. 175 refers to a reduction of revenue in mauza Datyana, pargana Bashta from causes unconnected with over-assessment and Rs. 1,000 to a reduction of revenue in the Sahanpur Forest mahál in pargana Najibabad which had lost ground owing to bad management and has since under the careful management of the Court of Wards fully reached Mr. Markham's estimate of its assets, it is clear from the experience of the last thirty years that in no case did the assessments of last settlement err in point of severity.

32. It was only to be expected that a settlement which almost immediately after its imposition was in many parganas declared to be seriously inadequate, should have been collected without any difficulty, and the statistics as gathered from the annual revenue reports fully bear this out. During the 21 years 1875-76 to 1896-97 of the total revenue demand Rs. 2,59,85,844 Rs. 2,57,53,558 or 99.16 per cent. were collected, and of the remaining sum Rs. 35,803 is covered by remissions chiefly in the famine year of 1877-78, the balance being entirely sums uncollected at the close of 1896-97 owing to the late famine. Leaving out the details of the minor processes for the collection of revenue, sale of the defaulters moveable property was only resorted to in 10 cases, attachment in 37, transfer in one, annulment in six and only in one case was sale of the defaulter's immoveable property necessary.

Working of the tenth settlement.

33. The following table gives the quinquennial details of sales of revenue paying and revenue free lands for the last 25 years (1872-1897). Full details for the previous years are not available.

Transfers of proprietary rights.

District.	Year.	Under orders of court.								By private transfer.								Number of other cases.	Total number of cases.	Remarks.
		Sale of revenue paying land.				Sale of revenue free land.				Sale of revenue paying land.				Sale of revenue free land.						
		Number of cases.	Aggregate land revenue (if property transferred).	Price.	Number of years purchase of the revenue.	Number of cases.	Estimated land revenue of property transferred.	Price.	Number of years purchase of revenue (assumed).	Number of cases.	Aggregate land revenue of property transferred.	Price.	Number of years purchase of the revenue.	Number of cases.	Estimated land revenue of property transferred.	Price.	Number of years purchase of the revenue (assumed).			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Bijnor.	1872-77	...	443	28,453	2,44,786	9	7	36	866	63	2,113	56,510	10,47,340	20	116	765	46,004	91	1,011	3,600
	1877-82	...	355	19,449	1,95,628	10	22	725	9,514	19	3,549	66,798	12,90,299	19	298	5,899	1,02,261	19	1,088	5,312
	1882-87	...	577	18,356	2,61,793	14	22	588	10,569	17	2,852	63,355	13,56,860	22	188	4,561	1,21,498	27	1,047	4,686
	1887-92	...	496	15,981	3,18,934	20	23	240	4,612	40	3,514	77,850	21,45,067	28	191	3,326	1,42,309	45	918	5,142
	1892-97	...	495	11,724	2,47,204	22	9	732	7,871	18	3,524	58,955	19,13,883	33	146	2,997	48,963	28	1,006	5,180
GRAND TOTAL,		2,366	93,963	12,68,348	15	83	2,321	33,462	28	15,552	3,23,468	77,53,449	24	939	16,648	4,61,035	46	5,070	24,010	

The figures are compiled from the statistics given in the annual revenue reports. According to them, property paying over one-third of the whole revenue of the district has changed hands during the past 25 years. Owing, however, to so many nominal transactions being included among the sales by private transfer, the returns afford very little indication of the true condition of things. Such as they are, they point to a very considerable rise in the value of land, the average price of land sold under the orders of court rising from nine years' purchase of the revenue to 22 years and of land sold by private transfer from 20 years' purchase to 33. It will further be noticed that the amount of land sold by the orders of court has decreased at each period.

So far then as any conclusion can be arrived at from these figures they fully bear out the previous evidence as to the lightness of the revenue during the currency of the tenth settlement, and show that notwithstanding the addition of cesses, the profits of the land owning classes have been very much above half assets.

### CHAPTER III.

#### COMPARISON OF THE PAST AND PRESENT CONDITIONS OF THE TRACT UNDER REPORT.

Area statistics.

34. The following statement gives the comparative statistics of total area for the tract under report following the present fiscal divisions of the district :—

Tahsil.	Pargana.	Total area in square miles.		Remarks.
		Past.	Present.	
Bijnor	Bijnor	108.37	106.94	
	Daranagar	97.04	90.69	
	Mandawur	102.1	104.63	
	Total tahsil	302.51	308.26	
Najibabad	Najibabad	97.59	97.44	Exclusive of forest tract.
	Kiratpur	87.8	88.72	
	Akbarabad	57.27	57.38	
	Total tahsil	242.66	243.54	
Dhampur	Dhampur	156.88	157.6	
	Seohara	104.04	102.91	
	Nehtor	64.83	64.78	
	Total tahsil	325.7	325.29	
Nagina	Barhapura	172.85	158.48	Exclusive of 13 forest villages. 10 " and the Rehar Government Reserve.
	Afzalgarh	166.1	165.02	
	Total tahsil	338.95	323.5	
	Total of tract under report,	1,209.82	1,200.59	

It thus includes the whole of the district with the exception of parganas Barpur and Bashta of the present Bijnor tahsil, pargana Chandpur of the present Dhampur tahsil, pargana Nagina of the Nagina tahsil and certain forest areas in tahsils Najibabad and Nagina which are either not assessable or whose assessments under B. O. No. <sup>1566N.</sup> 1-399, dated 30th July 1897 are yet to be revised.

The total area of the tract is 7,68,378 acres or 1,200.59 square miles. The variations in tahsils Bijnor, Dhampur and Najibabad are due to changes in the alluvial tracts along the rivers Ganges and Ramganga, and in tahsil Nagina to more correct measurements of the forest area, especially of the large revenue free estate belonging to the Raja of Kashipur.

The non-assessable area.

Revenue free area.

35. Of the total area 69,322 acres or a little more than 9 per cent. are held free of revenue. This area has declined by nearly 10,000 acres which is largely due to the correction of 9,004 acres in the area of the Raja of Kashipur's Jagir, about 1,000 acres only being resumed since last settlement. With the exception of the above Jagir, of 18 whole villages in parganas Seohara and Najibabad, and of some 11 mahals in parganas Seohara and Nehtor, it consists entirely of small plots or of land in the occupation of Government.

36. The remaining recorded non-assessable area is 92,121 acres or nearly 12 per cent. It consists of land occupied by village sites, by railways, roads and canals, of land covered with water and of land incapable of cultivation. It has declined by some 2,758 acres.

Other non-assessable areas.

37. The uncultivated groves of the tract under report covered in the years of survey an area of 7,932 acres, showing a decline of 2,372 acres. The decline is to some extent nominal as there has been during the currency of the present Settlement a considerable increase in cultivated groves which are now included in the cultivated area. In the forest parganas, too, instances of uncleared portions of the forest area, having been recorded as groves at last Settlement, have been brought to light. Apart from the enormous area covered by forest in the north of the district, Bijnor appears to be well wooded and there is no ground for supposing that the grove area has declined to any considerable extent.

The assessable area groves.

38. The land that though culturable was out of cultivation in the years of record amounted to 1,66,864 acres or 21·7 per cent. of the whole total area, being an increase of 6,312 acres on the area recorded at last settlement. It varies from 15 to 18 per cent. of the total area in tahsils Bijnor, Najibabad and Dhampur, and in tahsil Nagina with its large forest area is as much as 33 per cent.

Culturable waste, old and new fallows.

The correct distinction between culturable waste, unculturable waste and old fallow is practically impossible and the area of old fallow as recorded is much more than it should be.

There is still room for extension of cultivation in all parts of the tract and under the pressure of an increasing population, and an increased assessment it is probable that considerable further development will take place, especially in the Barhapura and Afzalgarh forest portions and in parts of the Dhampur tahsil.

39. The recorded cultivated area amounts to 68·5 per cent. of the total area in tahsil Bijnor, to 68·8 per cent. in tahsil Najibabad (the forest tract of this tahsil being altogether excluded), to 63·5 per cent. in Dhampur, and to only 27·8 per cent. in Nagina. In all save tahsil Nagina there has been a considerable increase in cultivation and in the Dhampur tahsil the increase would have been larger but for the unfavorable year in which part of the records were prepared. The extraordinary decline in tahsil Nagina, solely during the years of settlement, has been referred to at length in the pargana reports of Afzalgarh and Barhapura, and it has been found impossible to assess the majority of the villages on the recorded cultivation, which in spite of a well known very large clearance of forest since last settlement and a gradual yearly increase of cultivated area till the year settlement operations began, showed a decline of 20 per cent. on last settlement's figures.

The cultivated area.

In every tahsil the recorded cultivation is below the average of the previous five years, and though the recorded increase over the whole tract is not 1 per cent. in 1300 Fasli the year before settlement operations began, cultivation had increased by nearly 40,000 acres, or over 9 per cent.

40. The following statement compares the details of the irrigation of the past and present settlements :—

Irrigation.

Source.	Past. Acres.	Present. Acres.
Khoh canal ...	375	366
Gangan canal ...	2,751	5,068
Wells ...	7,176	15,127
Other sources ...	9,114	4,508
Total ...	19,416	25,069

The extension of canal and well irrigation is very noticeable, but considering the very temporary character of the chief sources little reliance can be placed on the figures of this statement which largely reflects the conditions of the rainfall of the year of record and the years immediately preceding it. In tahsils Bijnor, Najibabad and Dhampur the records of all parganas save those of Seohara were prepared in years of unusually heavy and seasonable rainfall, while in the parganas



of Seohara and in those of tahsil Nagina the rains of the year of record were scanty, badly sustained and practically came to an end by the middle of August.

Another fact which militates against a correct comparison of the present and former statistics is the system now followed in recording irrigation details. At last settlement only fields actually irrigated in the year of record were recorded as such, while in the present settlement all fields irrigated either in the year of record or in any of the preceding three years have been included in the irrigated area.

There was also considerable under-statement of the irrigation details at last settlement; but notwithstanding these facts there can be little doubt that there has been a noticeable increase in both canal and well irrigation and a marked improvement in the readiness with which the people on a serious failure of the rains resort to both sources as a means of supplementing deficient rainfall.

Crop statistics

41. The following statement gives the area of the various crops grown in the tract and compares the details for the past and present settlement with the average figures for the five years preceding revision :—

Harvest.	Crop.	Last settle- ment area.	Average five years area.	Present area.
		Acres.	Acres.	Acres.
Kharif	Sugarcane ... ..	33,154	50,698	49,898
	Rice ... ..	103,392	154,983	155,330
	Cotton ... ..	35,155	26,153	20,891
	Chari ... ..	7,076	16,491	13,504
	Bajra alone and in combination ...	32,301	32,135	29,269
	Other coarse kharif crops ...	37,648	39,525	29,129
	Total, Kharif area ...	254,726	319,985	297,832
Rabi	Wheat alone and in combination ...	102,996	128,976	119,273
	Gram ... ..	13,293	34,792	31,732
	Barley alone and in combination ...	19,719	38,426	31,473
	Minor rabi crops ... ..	16,742	21,877	13,706
	Bahan or fallow for rabi ... ..	14,504	...	...
	Total rabi area ...	167,254	224,071	199,183
	Dofasli area ...	...	88,075	72,515
	Total area for tract under report ...	421,980	455,981	424,500
	Pandra or land prepared for cane ...	27,255	24,815	25,931
	GRAND TOTAL FOR TRACT UNDER REPORT ...	449,235	480,826	450,431

Correct deductions from a study of these figures have been rendered impossible by the absence at last settlement of any record of the double-cropped area. From last settlement's report it appears to have been from 3 to 4 per cent. of the total area; but Mr. Markham placed no reliance on these figures, and believed them to have been uniformly under-stated. Notwithstanding these difficulties there can be little doubt that there has been a very large increase in the double-cropped area which amounted to 16 per cent. of the total area in the year of record and to 18 per cent. on the previous five years' average. The yearly area under cane and rice has increased by roughly one half, under chari and gram has more than doubled, under barley in combination nearly doubled, and all staples save cotton and bajra show a noticeable increase. This marked improvement in the cropping of the tract as the total cultivated area has but slightly increased must be ascribed chiefly to two causes :—(i) the opening up of the district by the Oudh and Rohilkhand Railway in 1887 (ii) and the cycle of wet years which immediately preceded the years of settlement enabling early rice crops, Indian corn and millets to be largely sown on land which in ordinary years could not in the autumn be sown at all, and the stiffer soils to be prepared and sown with spring crops after the autumn crops had been gathered. Of the greatest importance, however, both to the tenants and the landlords has been the extension of the area under sugarcane. The area now amounts to some 50,000 acres yearly, and as this is practically the only crop manured the area which is manured at least once in three years, has increased by quite 50 per

cent. and now amounts to some 150,000 acres. The importance of this crop to the tenant may be gathered from the fact that in average years a gross yield of Rs. 86 per acre is by no means an excessive estimate, making the gross produce of the cane of the tract under report some 43 lakhs of rupees, or practically double the total estimated rental of the whole tract. Taking the average zabti rental of the cane per acre throughout the tract, which is equally a lenient estimate of the rental received by the landlords, the rental from the cane area alone amounts to nearly 10 lakhs of rupees, or only Rs. 66,000 below the present revised revenue, thus bearing out the common saying in this district "*Ikh se Jamā diya Jata hai.*" The decline in the cotton area is the only noticeable decrease. Under the influence of seasonable rains this crop which is usually sown in cane fields after the cane has been cut, has been replaced by a crop of maize, millet or dry rice which can be immediately followed by the much more paying wheat or wheat and barley mixed.

42. The following table compares the proprietary tenures of the past and present settlement for the tract under report:—

Tenure.	Mahāls.	
	Past.	Present.
Single zamīndāri ...	952	1,305
Joint zamīndāri ...	848	1,736
Perfect pattidāri ...	46	88
Imperfect pattidāri ...	194	182
Bhaiyachāra ...	189	236
Total ...	2,229	3,547

Proprietary tenures.

Of the 3,547 mahāls therefore now in existence 3,041 or nearly 86 per cent. are owned in zamīndāri tenure chiefly by the influential families of Sherkot, Tajpur, Haldaur, Sahanpur, Seohara, and Kiratpur, and it is mainly owing to these large estates, that the multiplication of villages into mahāls has only resulted in an increase of some 50 per cent. The remaining 14 per cent. is divided up

among the various forms of pattidāri tenure chief among which are the "Bhaiyachāra" or as they are more commonly styled in Bijnor "*Lanadari*" mahāls.

43. The following statement shows the changes among the various proprietors of the tract under report:—

Caste of proprietors.

Caste.			Past area.	Present area.	Increase.	Decrease.
			Acres.	Acres.	Acres.	Acres.
Chauhans	...	...	233,676	227,541	...	6,135
Baniyas	...	...	80,702	98,201	17,499	...
Jats	...	...	103,329	96,833	...	6,496
Tagas	...	...	76,537	81,018	4,481	...
Sheikhs	...	...	76,529	77,991	1,462	...
Saiyids	...	...	32,862	41,113	8,251	...
Bishnois	...	...	30,347	27,202	...	3,145
Brahmans	...	...	33,944	26,599	...	7,345
Pathans	...	...	34,567	21,522	...	13,045
Gujars	...	...	9,298	14,905	5,607	...
Kaiyasths	...	...	19,955	13,700	...	6,255
Khatris	...	...	11,384	13,349	1,965	...
Rawas	...	...	6,125	6,610	485	...
Others	...	...	25,952	21,764	...	4,188
Total	...	...	* 775,507	768,378	...	7,129

The position of the proprietary classes is very much as it was at last settlement, Hindus, as then, holding about 82 per cent. of the whole tract. The losses have been mostly confined to the Pathāns, Jats and Kaiyasths, the gains being fairly distributed. The smaller area now held by the Chauhans, Brahmans and Bishnois is mostly nominal, in the case of the Chauhans owing to the excess area of 9,000 acres wrongly recorded in the Kashipur estate, in the case of the Brahmans owing to a confusion at last settlement between them and Tagas, and in the case of the Bishnois owing to the mortgaging of a large part of his estate by Chaudhri Ram Kuar Singh of Kanth. The breaking up of the Kot Kadir estate in Barhapura through the extravagance of its owner accounts for most of the losses of the Pathāns, and thriftless and careless habits, for the losses among the Jats and Kayasths. The money lending classes represented chiefly by the Baniyas have in

\* NOTE.—These figures are taken from Mr. Markham's report. Hence the difference of 1,222 acres between these figures and those given in Appendix I, Col. 2.

comparison with others considerably increased their possessions but, as a large portion of the increase is due to the extensive and practically nominal mortgage of part of the Haldaur estate, their effective gain is but small.

Condition of proprietors.

44. The large landowners are generally in prosperous circumstances, but owing to the enormous number of small resumed revenue free plots which are scattered about throughout the majority of the villages in the tract the condition of the small proprietors with the exception of a few well-to-do proprietary communities, would be one of a constant struggle for bare subsistence but for the fact that many of them supplement their income by various kinds of service.

Of the total area 82.99 per cent. is held by khalsa owners and 7.29 per cent. by plot holders. The khalsa owners, however, constitute only 51.4 per cent. of the total number of owners, while the plot holders constitute 38.7 per cent.; and when it is considered that it is very common for the same khalsa owner to be repeated over and over again, while it is very unusual for a man to hold more than one plot, it will be seen how very minute the individual share of a plot-holder is.

Cultivating tenures.  
Sir and khudkasht.

45. At last settlement according to the mahál registers there were 34,355 acres of sir and 32,837 acres of khudkasht, giving a total of 67,192 acres cultivated by proprietors. Little reliance, however, can be placed on the differential details of these records, as in most cases the village papers differ from the mahál registers by making no distinction between sir and khudkasht, the word sir being practically unknown in the village papers except to denote the special holding of a co-sharer. It is consequently only possible to compare with any advantage the total proprietary cultivation at both settlements, although the details at the present revision have been carefully abstracted. The present figures show a decline of 12,200 acres, or roughly 18 per cent. This marked decline is due largely to two causes, to the transfers among proprietors which have been most numerous in the case of petty proprietors in whose hands the largest amount of proprietary cultivation is usually found, and to the more careful abstraction of statistics at the present revision, leading to the exclusion of a considerable area of sublet khudkasht. The area under ex-proprietary rights has increased from 259 to 2,371 acres a natural consequence of the decline in proprietary cultivation.

Occupancy tenure.

46. The decline in occupancy lands from 221,306 acres to 203,765 acres or nearly 8 per cent. is very noticeable. It is fairly general throughout the tract, the parganas of the Dhampur tahsil and pargana Kiratpur alone showing a slight increase, chiefly owing to the consideration shown to their tenants by the Tajpur, Kiratpur and Dhampur estates. The great objection to the acquisition of these rights in Bijnor, from the landlord's point of view, is that once the tenant has obtained a fixed cash rent the landlord is barred except at considerable trouble and expense, from obtaining any share of the unearned increment accruing to the tenant from the gradual rise in prices which has been brought about by the opening up and development of all parts of the country. Hitherto, in Bijnor, as the great majority of the tenants paid their rents by division of the crop, or by temporary cash valuations of that division, the landlords have had no difficulty in securing for themselves a full share of this increment, and it is not surprising therefore to find at last settlement with practically no permanent rents, with no differential rates based on possession, and with a demand for tenants rather than for land, that the landlords evinced little or no hostility to the acquisition of these rights and that of the total area held by tenants fully 58 per cent. was held in occupancy tenure.

The gradual acquisition of fixed cash rents, and a general diffusion of a knowledge of Revenue law among all classes, has naturally altered all this, and, during the last half of the currency of the present settlement, both tenants and landlords have been fully alive to the advantages and disadvantages of a right of occupancy, and it is no exaggeration to describe the Revenue Courts as being flooded with suits, the real and often the sole point in issue being the acquisition of a right of occupancy. In such a contest the success of the more powerful and educated landlords was inevitable and

their powers of destruction have been greatly enhanced by the peculiar rental customs of the district under which by means of temporary cash leases it is possible for a grasping landlord to rack rent his occupancy tenants without recourse to the Revenue Courts, and then eject them for arrears.

47. The cultivators of the tract under report consist largely of Jats, Chauhans, Sanis, Sheikhs, Chamars, Rawas, Brahmans, Tagas, Pathans, Saiyids, Gadariyas, Gujars and Banjaras. Jats are to be found all through the tract and Chauhans in all but pargana Bijnor, Jats predominating in the seven western and central parganas and Chauhans in the four eastern ones. Rawas appear in parganas Bijnor, Mandawur, Kiratpur and Najibabad along the banks of the river Malin and Tagas in parganas Kiratpur, Seohara and Nehtor and in a few villages of parganas Bijnor, Dhampur and Afzalgarh. Sanis, Sheikhs, Chamars, Pathans, Saiyids, Gadariyas, Gujars and Brahmans are to be found in small numbers scattered about throughout the various villages, the first named being exceptionally numerous in pargana Nehtor. Banjaras cultivate only in the forest tracts of parganas Dhampur, Afzalgarh and Barhapura. The remaining cultivators are nowhere sufficiently numerous to require special mention, but the extent to which castes, hitherto considered as non-agricultural, have taken to agriculture is very noticeable.

The best cultivators are undoubtedly the Rawas, who are unsurpassed in their knowledge, skill and industry, but confined as they are to a comparatively small tract on both sides of the Malin, their influence on the district is but small. Equally unsurpassed in his own particular line of market gardening is the Sani, and where he has taken to the broader style of cultivation, his influence on the village rent-roll, as in pargana Nehtor, is very remarkable.

The great mass of the cultivators however, are Jats and Chauhans, and it is owing to the general excellence of these two classes of cultivators that Bijnor has been enabled to retain its reputation as one of the best sugar producing districts in the north of India.

48. The following statement gives the area occupied by each caste together with some details of the rental incidence paid per rented acre :—

Tract under report.									
Serial number.	Class of cultivators.	Area held by each caste of cultivators.							Remarks.
		Cash paying area.			Grain rented area.	Total area.	Area of sir, and Khudkasht cultivated by each caste.		
		Area.	Rent.	Incidence.					
								Acres.	
1	Jats ...	66,336	3,32,498	5 0 2	46,186	1,12,522	17,004		
2	Chauhans ...	38,031	2,21,978	5 13 5	61,715	99,746	10,007		
3	Sanies ...	12,208	78,171	6 6 5	20,425	32,633	83		
4	Sheikhs ...	16,732	83,104	4 15 6	12,687	29,419	7,113		
5	Chamars ...	9,389	51,787	5 8 3	18,754	28,143	24		
6	Rawas ...	15,418	88,869	5 11 9	2,653	18,066	2,393		
7	Brahmans ...	3,855	19,210	4 15 9	5,118	8,973	1,562		
8	Tagas ...	4,869	26,813	5 8 1	3,410	8,279	5,832		
9	Pathans ...	2,986	14,064	4 11 4	2,551	5,537	1,678		
10	Saiyads ...	2,832	14,370	5 1 2	2,459	5,291	3,746		
11	Gadariyas ...	1,796	9,038	5 0 6	3,425	5,221	9		
12	Gujars ...	1,991	9,339	4 11 1	3,155	5,146	36		
13	Banjaras ...	422	1,132	2 10 11	3,481	8,903	...		
14	Bishnois ...	2,031	10,864	5 5 7	1,033	3,064	611		
15	Jalahas ...	1,088	5,893	5 6 8	1,921	3,009	86		
16	Banias ...	502	2,377	4 11 9	845	1,347	2,021		
17	Others ...	19,800	1,02,757	5 3 0	31,432	51,232	2,903		
	Total ...	2,00,281	†10,71,764	5 5 8	2,21,250	*4,21,531	*55,108		

\* These figures also include 13,176 acres of revenue-free areas.

† Difference from figures in Statement III is due to inclusion of rent of the Jagir villages.

Caste and condition of tenants.

The rent rate of the whole tract is Rs. 5-5-8. It is highest in pargana Nehtor, where the rate is Rs. 6-5-7 and lowest in pargana Mandawur, where it is Rs. 4-8-10.

There is in reality little difference in the soil rents paid by Jats and Chauhans, the difference of incidence in this statement being due to the fact that Jats are found all through the sandier and poorer portions of the district, while Chauhans predominate in the richer central and eastern tracts. The rent rate of Sanis is swelled by the high rentals paid for garden cultivation, and of Rawas is lowered by the fact that a considerable portion of the area of their villages consists of the poor and sandy slopes, leading down to the valley of the Malin. The low rate of rent paid by Banjaras is a consequence of their cultivating only in the remote forest tracts of Nagina, and with the exception of Pathans, Gujars and Banias, none of whom are numerous, the rental incidence per rented area shows a remarkable correspondence.

Condition of the cultivating classes.

49. In spite of the absence of irrigation the soil of the district is very fertile, and with the considerable rise in the price of agricultural produce, the condition of the cultivating classes has become one of comparative comfort and prosperity. How much their condition has improved is shown by the ease with which the effects of the late famine were resisted, and though they are probably not so well off as their neighbours in the canal irrigated districts of Meerut, Muzaffarnagar and Saharanpur, there has been a very noticeable improvement in their standard of living. The agricultural labourer has equally shared in the general improvement.

Comparison of former and present rents.

50. For the purpose of comparing the rental rates of the former and present settlement, no attention can be paid to the entries of the rents of proprietor's cultivation, or of rent-free or favoured tenures, none of which represent a true rent nor to the entries of grain rents which are universally incorrectly recorded and generally under-stated. The following statement compares the true occupancy and non-occupancy cash-rents as recorded in the former and present settlements after excluding all *zabti* rents, which were included among the cash-rents at last settlement :—

Description.	Former Settlement.			Present Settlement.		
	Area.	Rental.	Incidence.	Area.	Rental.	Incidence.
Occupancy ...	57,948	2,30,379	3 15 7	1,15,348	6,12,984	5 5 0
Non-occupancy ...	46,867	1,84,394	3 14 11	80,067	4,29,523	5 5 9
Total ...	1,04,815	4,14,773	3 15 3	1,95,415	10,42,507	5 5 3

It will thus be seen that the rise in occupancy rents is 33·5 per cent., in non-occupancy rents 36·3 per cent., and in the combined occupancy and non-occupancy rents 34·8 per cent. With these figures may be compared the details of the temporary or *nakshi* leases. For the ten years, 1272 Fasli to 1281 Fasli, Mr. Markham has recorded that 1,47,478 acres were leased in the tract under report for Rs. 6,07,183, or at a rate of Rs. 4-1-11, while the corresponding rate for the leases during the twelve years preceding the present settlement, irrespective of those leases recorded as cash rents in the year of record, is Rs. 5-7-7, showing a rise of 32·9 per cent. This latter rise is naturally less than that of the combined occupancy and non-occupancy rentals of the two settlements, as Mr. Markham's leases refer partly to a period succeeding the preparation of last settlement's records, during which, owing to the famine of 1276 Fasli (1868-69) there was a sudden and considerable rise in prices. The rise in rents which cannot be less than 30 per cent. is obviously therefore the chief reason of the present enhancement of the revenue and it is necessary to enter into some details as to its origin.

Causes affecting the rise in rents.

51. The most important causes affecting the rise of rents appear to have been (a) the increase in the gross outturn of produce owing to improved methods of cultivation, (b) the increase in the share of the produce taken by the landlord, and (c) the rise in the price of agricultural produce. There is nothing whatever to show that the produce of the soil has in any way diminished, and with the considerable exten-

sion of the double-cropped and manured areas, and the substitution of iron sugar presses for the old-fashioned and clumsy wooden ones, it is extremely probable that the gross outturn per acre has increased, and as under the prevailing system of grain-rents and temporary leases, and with the substitution of division for the old cash crop rates for sugar in a considerable number of villages, the landlords have been enabled to appropriate a fair share of this increase, a certain portion of the rise in rents, though it is impossible to estimate how much must be put down to these causes.

52. The chief cause, however, has been the rise in the price of agricultural produce.

Rise in prices.

The following table gives the average prices in seers per rupee for wheat, barley, *rāb* or the boiled juice of the sugarcane, rice, and bajra, which together occupy over five-sixths of the total cultivated area of the tract, for the seven quinquennial periods from 1862 to 1896 :—

Period.	Wheat.	Barley.	<i>Rāb</i> .	Rice.	<i>Bajra</i> .
1862—66 ... ..	23·8	33·4	10·75	15·1	26·98
1867—71 ... ..	17·14	25·54	10·48	13·75	21·68
1872—76 ... ..	20·37	29·24	12·78	14·21	22·53
1877—81 ... ..	15·3	22·69	9·44	11·4	15·8
1882—86 ... ..	19·23	29·00	10·56	13·05	22·00
1887—91 ... ..	15·37	22·46	11·36	12·08	16·6
1892—96 ... ..	15·28	23·35	10·45	11·28	16·41

According to these figures the price of wheat between the two periods of 1862—66 and 1892—96 has risen to 55·7 per cent., of barley 43·04 per cent., of rice 33·9 per cent., of bajra 64·3 per cent., and of sugar only 3 per cent.

It is not easy to work out the actual figures which represent the purchasing power of the rupee for each of these periods; but as far as it affects rents, the nearest approximation to the purchasing power will probably be obtained by considering the relative annual production of each of the staples in conjunction with their average prices. From the statistics at my disposal it may roughly be said that the relative production in maunds is of wheat 4, of barley 2, of rice 5, of sugar 6, and of bajra 1. On this basis the purchasing power of the rupee in 1862—66 was 18·52 seers, and in 1892—96 13·56 seers. This points to a rise in prices of a little over 36 per cent. With this may be compared the result obtained by taking the average of the prices of all staples for each period, which points to a rise of 43·32 per cent. and allowing for all possible errors, it may be taken that the rise between the two periods 1862—66 and 1892—96 has been something between 35 and 40 per cent.

53. As this rise in prices is the chief cause of the rise in rents, and as in this district owing to the large area under grain rents and to the constant interchanges between cash rents and grain rents, rents are very closely in touch with prices, it is important to examine to what extent this rise in prices may be considered as a permanent one. An examination of the prices of the various staples for the last 35 years at once reveals the fact that prices have been gradually rising, that notwithstanding constant variations once prices have definitely risen, they have never returned to their original level, and that year by year prices have become more and more steady and constant. It will be seen that distinct rises in prices took place in 1867—71, 1877—81, 1887—91, and that whenever the rise was chiefly due to a shortening of supplies, such as was caused by the famines of 1868—69 and 1877—78 it was immediately followed by a distinct fall, but that when it was due largely to the opening out of the district, as was the case in 1887—91, by the construction of the Oudh and Rohilkhand Railway, no such fall occurred. There cannot be the least doubt, therefore, that the gradual rise up to 1887, and the exceptional rise in 1887—91, were to a large extent due to the gradual opening out of the district, and so far as

this cause is concerned, it would be contrary to all experience to expect any decline. There is, however, another cause which has during this same period also been operating to produce a rise in prices, the gradual decline in the value of silver and in the gold value of the rupee, and it is not so easy to gauge its effects. It is probably by no means so powerful a factor as the former in determining prices as the country consumes a very much larger portion of its produce than it exports, and to that extent its prices will be less affected by gold values. And as the gold value of the rupee is now practically constant at a value somewhat lower than its average gold value during 1887 to 1891, there is apparently no reason to anticipate a fall in prices lower than those prevailing in 1887—91.

Leaving out the exceptional rise in prices caused by the late years of famine and scarcity, prices have remained practically constant since 1887, and so far, therefore, as the rents of the district depend on the prices of the ordinary staples, there is no reason to apprehend that the present assets are likely to form an unstable basis for the assessment of a revenue, which will continue in force for the next 30 years.

54. The introduction of an import duty on all bounty-fed sugars has rendered unnecessary any detailed reference to the possible results of an increasing import of these sugars on a district whose high rental incidence is due to its large and profitable cultivation of sugarcane. Up to the present there have been no signs of any decline in the area under cane; in fact, the area has still further materially increased since settlement operations have closed. But it is undoubted that the price of sugar has been gradually falling, for in spite of a well-known decline in the gold value of the rupee, rupee prices in the district have remained remarkably constant. Prices this year have fallen considerably (from Rs. 13-8-0 to Rs. 11-8-0 per *palla* of three maunds for the raw produce) and, although in common with other staples, this has been partly brought about by the reaction from the past years of scarcity, it is impossible to believe that the increased imports of bounty-fed sugars can have had no effect on a district which exports yearly by rail alone some seven lakhs of maunds of sugar. And though there is still a very large margin of profit left to the cultivator, the profits of the sugar refineries have so considerably declined that it could only have been a matter of time for the cultivation of cane to be affected; and any large decline in the area under cane would so seriously affect the rental assets that the collection of the newly-revised revenue would of necessity be attended with much hardship and difficulty.

#### CHAPTER IV.

##### PROCEEDINGS PRELIMINARY TO ASSESSMENT.

Inquiry previous to  
settlement.

55. The revision of the 10th settlement was decided on in 1893, after a very full inquiry by Mr. Miller, the then Director of Land Records and Agriculture. His inquiry showed that owing to the extension of the cultivated area and of the cultivation of the more valuable staples, to the opening up of the district by the Oudh and Rohilkhand Railway, and to the considerable rise in the price of agricultural produce, a very large enhancement of revenue could confidently be expected. He recommended that the revision of the records should be carried out in the same way as in other districts, *viz.* on the basis of the old settlement maps, so long as resurveys were made of the villages in which alterations were unusually large or where cultivation had greatly increased.

Commencement of  
settlement opera-  
tions.

56. It was originally intended that a Settlement Officer should be appointed from the beginning; but in the cold weather of 1893, when the district was first formally placed under settlement, the Collector of the district, Mr. Fraser, was put in charge of the revision of the records, and an Assistant Settlement Officer and two Settlement Deputy Collectors were deputed to carry out the work under his supervision. During the cold weather of 1893-94 the whole of the settlement staff, with the assistance of the district patwāris and kanūngos, was occupied in the preparation of the new settlement record for parganas Bijoor, Mandawur, Dāranagar,

Akbarabad, and Kiratpur, and on the arrival of the Settlement Officer in November 1894, it was found possible to start the work of assessment at once.

57. The Board of Revenue, agreeing with the Director, had been of the opinion that where necessary the resurvey of villages could be conducted without the assistance of the professional Survey Department, but it was very soon found that the maps of the forest villages were absolutely useless, as a large number of the villages had never been demarcated, and the maps in the hands of the patwáris contained only the barest representation of the area under cultivation mapped out in the roughest possible way. Sanction was accordingly obtained to the resurvey of the majority of the forest villages in parganas Najibabad, Barhapura and Afzalgarh. In the remaining portions of the tract the old settlement maps were merely brought up-to-date, the work being almost entirely carried out by the district staff of patwáris, trained amíns only being utilized in villages where owing to fluvial action or other causes, a complete resurvey of the interior of the maps was necessary. The accuracy of these latter maps is of course dependent on the correctness of last settlement's survey; but the experience of the assessing officers has shown that the new maps, though not absolutely correct to scale owing to the shrinkage of the waxcloth on which the old maps were traced, are excellent as indices to the village papers, and are likely to prove sufficiently correct for all administrative and settlement purposes.

The maps.

58. The khasras were prepared *pari passu* with the maps, and, after a complete renumbering of all the fields, slips containing an extract from the rough khewats and jamabandis were distributed among all the landlords and tenants. The attestation of these slips was carried out in strict accordance with the Board's rules (Circular I—15, dated 7th September 1894) and need not be further referred to, though, owing to their previous neglect, the work of bringing the khewats up-to-date was rendered extremely difficult and complicated. When the attestation was complete, the papers were sent into the vernacular office, where the new settlement record was prepared and the necessary assessment statements compiled. Considerable trouble has been taken over the checking of these records, and though it is impossible to avoid mistakes, it is hoped that the various records will be found to agree among themselves, and to be sufficiently accurate for all necessary purposes.

The khasras, khewats and jamabandis.

59. In the middle of 1895, after the records of six parganas, Bijnor, Mandawur, Dáranagar, Akbarabad, Kiratpur and Nehtor had been completed, the preparation of attested jamabandis was, under the orders of Government, put a stop to, except in the forest villages which had been newly surveyed by professional agency. In the remaining parganas under report the patwári's records were merely revised and brought up-to-date, the khewats alone being attested. After the assessment of these parganas on unattested records had been completed, further orders were received, and a complete settlement record has now been prepared.

Attestation of jamabandis dispensed with.

60. In his preliminary inquiry the Director of Land Records and Agriculture expressed considerable doubt as to the suitability of the then system of assessment to Bijnor owing to the very large area that must be assessed on assumed assets, derived from the application of rates of some sort or other, and at one time it was intended that the Settlement Officer should be assisted by special rules framed to meet the unusual difficulties of the district. In the end, however, the Settlement Officer was left to do his best on the general rules applicable to other districts and, as far as the conditions of the district would allow, these rules have been carefully followed. Reference has already been made to the peculiar rental arrangements of Bijnor; and it will be seen that classified soil rates are entirely unknown, and that neither customary nor prevailing rates for particular soils or areas enter into the rental economy of the people. But although, owing to the generally prevailing custom of payment of rent in kind or by cash crop rates, no differential soil rates can be discovered; there are, and have been from time immemorial, four natural soils—sawái or loam, matyar or clay, bhur-sawái or sandy-loam, and bhur or sand—fully recognised by the people. In addition to these, the artificial distinctions of bara or garden land, of

Soil classification.



manured and of irrigated soils, have also been generally recognised. At last settlement consequently seven separate soil classifications were followed—the four natural soils and the artificial distinctions of “manured,” “irrigated,” and “manured and irrigated combined.” It is unnecessary to refer at any length to the objections attending the separate classification of manured land as its impracticability has been fully recognised in the adjoining districts of Muzaffarnagar and Saharanpur, and as the system of carefully cultivating all the good land in a village, irrespective of its distance from the homestead, which is so prevalent in Bijnor, precludes any artificial distinction based on that distance, the soil classification has been confined to the four natural soils, with the addition of Bara or gardenland, and with the sub-division, in permanently irrigated tracts, of the four natural soils, into irrigated and unirrigated. The distribution of the assessed area into each class of soil is shown in Appendix V.

#### Demarcation of soils.

61. Owing to the large area that has to be assessed on assumed assets, the classification of soils in Bijnor has acquired an unusual importance, and much attention has therefore been directed to their correct demarcation. The patwari first entered up the demarcation as recorded at last settlement, amending it where obviously incorrect, and demarcating himself newly cultivated fields. His work was then checked field by field by his immediate supervisor, who roughly outlined in pencil on the corrected map the blocks into which the soils apparently fell. The map was then made over to a specially trained demarcator, who corrected where necessary, inking in the blocks of soil, and his work was again checked by the officer in charge of the field work. At the time of inspection for assessment purposes these blocks were all carefully inspected by the assessing officer, who finally passed or altered the classification. The sub-division of the soils into irrigated and unirrigated was carried out in the office, all fields irrigated in the year of record or in any one of the three previous years being classed as irrigated.

#### Formation of circles.

62. Owing to the large number of grain-rented villages but little assistance could be obtained in framing circles from the cash rents actually in existence and, as at last settlement, the assessment circles have been based, almost without exception, on topographical considerations. In parganas where the tracts are large, it has been possible to sub-divide them into superior and inferior circles; but this sub-division has only been carried out where the inferior villages were found naturally to fall into compact groups. The details of the various circles into which each pargana has been divided will be found at length in the various pargana reports, and it is unnecessary to repeat them here.

#### Selection of standard circle rates.

63. The selection of standard circle rates owing to the absence of any kind of classified soil rates, and to the great prevalence of grain-rents, has been attended with much difficulty. At last settlement the rent-rates proposed and sanctioned were based almost entirely on a calculation of the landlord's share of the estimated value of the crops produced yearly per acre by each soil, and no attempt appears to have been made to analyse the numerous leases and lump cash rentals which were actually attested or had been in existence during the years previous to assessment. If sufficient time and a large staff of experimenting officers had been allowed, it is possible that similar rates could have been worked out. But the difficulties of overcoming the personal equation of the experimenting officers, the serious assumptions involved both in basing general estimates of outturn on the results of what after all could be but an infinitesimally small proportion of the total area as well as in estimating the value of that outturn by calculations of prices for a single year or series of years, and the impossibility of arriving at a correct calculation from a consideration of only two or three of the many factors on which the rental value of any particular soil depends, renders this method so unscientific and untrustworthy, that even if it had been contemplated in the present rules its adoption would have been practically impossible.

An attempt to obtain some assistance from the records of the patwaris' bahi-khata-jins was rendered abortive by the absolute unreliability of the entries in these records, and in the end it was found impossible to base the circle rates on anything

but the verified records of the rentals of the cash-paying area, assisted by the details of the numerous lump cash leases, which the tenants of grain-rented villages had paid during the previous 12 years. These figures, however, only showed that a particular area consisting of some or all of the different kinds of soil paid certain lump rents and apart from the impossibility of using all-round rates in a district where there is hardly a village consisting of less than two kinds of soil, and these in constantly varying proportions, the rules rendered it necessary that differential circle soil rates should be framed.

In most districts where cash rents have been long and permanently established it is possible both by inquiry and analysis to ascertain the village differential soil rates, because although they find no place in the record, they are recognised by the people and have been undoubtedly used, even though at some remote period, to determine the original rentals fixed on the various holdings. But in Bijnor no amount of inquiry or analysis will elucidate any such rates, and it has therefore been necessary to devise some form of differential soil rate which will answer the purpose of a standard circle rate. In the earlier parganas the rates for each soil were arrived at from the total cash-rental after deducting all fraudulent, inadequate or excessive rentals by a purely mathematical calculation; the ratio of the rental values of the various soils being obtained from a consideration of the average rent per acre of holdings, either of one kind of soil or which contained over 90 per cent. of one kind of soil.

After further experience this method was more elaborated and differential soil rates were obtained village by village by analysing the various holdings, and with their assistance and the assistance of rates obtained by the previous method, standard circle rates were selected for each soil, which satisfied the test which the rules under which the settlement has been conducted lay down.

The standard circle rates finally selected for each circle in each pargana will be found in the various pargana reports.

64. It will be noticed that no separate rates for occupancy and non-occupancy land have been framed.

Separate rates for occupancy land.

No such separation appears to have been contemplated by the rules; and though much might be said in favour of it in districts where the line between occupancy and non-occupancy rent-rates is very marked, the conditions of Bijnor are such that it would have not only been difficult, but practically useless. Under payments in kind, differential rates for occupancy and non-occupancy holdings are the exception rather than the rule, and it is only of late years that any attempt has been made to separate the rentals of these holdings.

65. The following table compares the application of the rates selected to the cash-paying areas throughout the tract:—

Comparison with actual rents.

Description.	Area.	Rental.	Incidence.	
			Rs.	a. p.
Recorded cash-rents	196,116	10,49,345	5	5 7
Standard valuation of recorded cash area	196,116	10,00,310	5	1 7
Accepted cash rents	168,751	9,05,620	5	5 10
Standard valuation of accepted cash area...	168,751	8,66,342	5	2 2

These figures show that the standard rental is 4.3 per cent. below the accepted cash rental, and is nearly 5½ per cent. below that of the recorded cash rental.

66. As a standard of comparison, therefore, for the cash-rented areas in general, these rates cannot but be regarded as moderate, and it is only necessary now to refer to what may be called the critical point of the present settlement—their applicability as a basis of valuation to the assumption areas, and more especially to the grain-rented lands. It is a generally accepted axiom that grain-rented lands are much inferior in rental paying capacity to cash-rented lands; but although this may be true in a district where cash rents are the general rule and grain-rents the exception, in a district like Bijnor where the old custom of payment in kind is everywhere in force, where a village grain-rented this year may be cash-rented next, and

Their application as a basis of valuation to the assumption areas

where it is most unusual to find a tenant holding under both systems at the same time, grain rents are never distinctly associated with inferior or precarious soils. It is impossible, therefore, to say that because a village or holding is found to be grain-rented, it is inferior or that an acre of grain-rented soil is inferior to an acre of cash-rented and similar soil. It is true that, as a whole, the grain-rented area is inferior to the cash-rented, because in the gradual development of cash-rents by means of *nakshi* or temporary leases, the inferior or precarious villages are the last to depart from grain-rents; but if the demarcation of soils, in accordance with their rental paying capacity has been at all correctly carried out, this inferiority should be clearly seen in the percentage of poorer soils found in grain-rented lands. That this is indeed the case may be seen from the following comparison for the tract under report:—

Description.				Sawái.	Matyar.	Bhur sawái.	Bhur.
Cash-rented	...	...	...	54.4	21.01	14.32	10.27
Grain-rented	...	...	...	47.78	26.81	15.36	10.05

and for tahsil Bijnor, in which by far the great majority of the precarious soils are found:—

Description.				Sawái.	Matyar.	Bhur sawái.	Bhur.
Cash-rented	...	...	...	46.6	7.95	22.37	23.8
Grain-rented	...	...	...	31.02	9.61	26.15	33.12

And when the assumed value per acre of grain-rented lands (Rs. 4-7-4) is compared with the actual recorded value (Rs. 5-5-8) of cash-rented lands, it will be seen that full allowance has been given on this ground. The constant alterations between grain-rents and cash-rents in many villages have further resulted in a large number of villages being attested as grain-rented which in former years had been under cash leases, similar to those attested as the actual cash-rents of the district, and from this circumstance it is possible to show that for a considerable portion of the grain-rented assumption areas, the standard circle rates are certainly moderate in their application to those villages. The following figures give the area and leases for the tract under report, and show their correspondence with the valuation of the same lands at standard circle rates:—

Area.	Lease.	Incidence.	Corresponding area now grain-rented.	Standard valuation.	Incidence.
Acres.	Rs.	Rs. s. p.	Acres.	Rs.	Rs. s. p.
54,903	3,00,837	5 7 7	55,284	2,83,612	5 2 1

Adding this area to the area recorded as under cash rents, it will be seen that the standard circle rates are moderate as compared with the known rental of quite 54 per cent. of the whole assessed area, and the assumption involved in the general application of these rates to the remaining 46 per cent. is less than in the adjoining district of Muzaffarnagar, where the cash-rented area was only 52.5 per cent. of the whole. And it must not be forgotten that this remaining area contains all the *sír* and *khudkásht* of the tract (nearly 15 per cent. out of the 46 per cent.), and all the tenant land of what are, in general, the finest villages in the district, the *bhaiya-chára* and *pattidári* estates owned by resident owners, who being on the spot practically never take cash-rents. There is thus little reason to suppose that the present standard circle rates are in any way inapplicable in general to the assumption areas.

## CHAPTER V.

## ASSESSMENT OF THE REVENUE AND ITS INCIDENCE.

67. The assessed area amounts to 468,829 acres, and differs from the total cultivated area of the year of record by including rented fallow and land fraudulently left out of cultivation, and by excluding uncultivated grove lands, included in the rented area, and land deducted in villages, where the recorded area was found to be too high to form a stable basis of assessment. The rented fallow amounts to 31,019 acres, and is very largely land usually cultivated, which either owing to accident or to the system of fallows followed in the district, happened to be uncultivated in the year of record. Eight thousand six hundred and thirty-eight acres, chiefly in the parganas of Barhapura and Afzalgarh, have been added as land fraudulently left out of cultivation. The majority of this land was really added to bring the assessed area of particular villages up to the normal, and has only been included under this head in the absence of any special place for it. Two thousand nine hundred and sixty-seven acres have been deducted in villages where the recorded area was found to be too high to form a stable basis of assessment, and 305 acres for uncultivated groves included in rented holdings in accordance with B. O. No.  $\frac{270}{1-97}$ , dated the 11th April 1894. It will thus be seen that out of a total assessable area of 606,935 acres, only 77·2 per cent., and out of total recorded fallow of 1,29,991 acres, only about 29 per cent. has been assessed. It is true that the recorded fallow is much in excess of the actual facts, but these figures show that there is little reason to suppose that the area assessed on is at all excessive, especially when the average cultivated area of the five years, previous to settlement, amounted to quite 4,60,000, acres after deducting revenue-free cultivated lands.

The assessed area.

68. Of this assessed area 1,96,116 acres or 41·8 per cent. was cash-rented in the year of record, the remaining 272,713 acres having to be corrected by means of some kind of rates. Of the total number of maháls 3,547, all but 395 required correction, and from what has already been said, it will not be surprising to find that standard rates or modified forms of them have been used in 2,553 maháls or 81 per cent., the remaining maháls being corrected by village or neighbouring village analysed rates. In the earlier parganas standard rates were used without any modification, the rules then existing not permitting the use of modified standard rates, but all unfairness in assessment was avoided by making allowances in the actual assessment.

Correction of rent-rolls.

69. Details of the corrected rent-roll will be found in Appendix VII.

The corrected rent-roll.

The total recorded area and rental of the cash-rented lands, namely, 196,116 acres, rented at Rs. 10,48,866, differs from the figures given in Statement No. I. owing to the deduction of the rental and area of uncultivated grove lands included in holdings, and to the necessary corrections for concealed, rack-rented and inadequate rent-rolls.

The figures in Statement No. III also differ from the figures in Statement No. IV owing to the fact that the results of the attestation of the five parganas, which were assessed on unattested records have been included in the latter statement, and as the difference between the totals of the unattested and attested figures of the cash-rented area only amounts to ·3 of the area and to ·08 of the rental, it will be seen that the rent-rolls were as a rule correctly recorded in the village papers. The rent-rolls were also generally suitable as a basis of assessment. Out of the 3,547 maháls brought under assessment, the rent-rolls of 24 only were rejected for concealment, of 99 for rack-renting, and of 104 for inadequacy, and the total accepted rent-roll of the cash-rented lands differs only by Rs. 479 from that recorded. The accepted rental of cash-rented occupancy lands amounts to Rs. 5-3-11 per acre as compared with Rs. 5-7-8 for cash-rented non-occupancy lands. Sír lands have been valued at Rs. 5-1-0. The rate closely approximates to that for cash-rented occupancy lands, which is as it should be, as these lands are generally fully up to the standard of the best tenant land. Khudkásht lands have been valued at Rs. 4-15-7 or slightly lower than the rate for sír land. The difference is probably due to these lands sometimes

including poor land, which landlords cannot induce cultivators to take up. Grain-rented lands have been valued at Rs. 4-7-9. The comparatively high incidence of nominally-rented lands is probably to be explained by the fact that the majority of these lands are to be found in the richer parganas, and in small plots scattered about all over the villages.

Additions to and deductions from the rent-roll.

70. The total rent-roll thus amounts to Rs. 22,91,238. To this must be added the income from sayer, which amounts to Rs. 11,730, and consists of the receipts from the sale of thatching grass, from grazing fees, and similar products of waste land. The additions for fraudulent cultivation amount to Rs. 22,745 with an incidence of Rs. 2-10-2. The lowness of this incidence is due to these additions being almost entirely made in the low-rented forest parganas of Barhapura and Afzalgarh. The deductions for excess cultivation amount to Rs. 9,979, with an incidence of Rs. 3-5-10. These deductions were chiefly made in the sandier parganas, where long fallows are necessary, and the area of the year of record is often much too large to form a safe basis for assessment.

Sir allowance.

71. The deductions for sir amount to Rs. 16,754, or over 11 per cent. of the total sir rental. In the parganas first assessed the allowance, owing to a misunderstanding of the rules, was not as freely given by the assessing officer as it might have been; but the reductions made by the higher authorities in maháls where according to the later rules, the allowance was justifiable, fully remedied this error.

Allowances for improvement.

72. No allowances were granted for landlord's improvements. In most districts the allowances are granted for masonry wells, used for purposes of irrigation, and in the absence of such well-irrigation, no opportunities for granting them were brought to notice. In the forest villages, land newly brought under cultivation, but not permanently established, was left out of assessment, and no allowance could be given for this kind of improvement as the clearance of the forest never entails any expense on the landlords.

The net assets.

73. The following statement gives the area, rental, and incidence of the various components of the net assets, and compares them with the standard valuation :—

Description.	Area.	Corrected rent-roll.	Incidence.	Standard rent-roll.	Incidence.
	Acres.	Rs.	Rs. a. p.	Rs.	Rs. a. p.
Tenants-at-will cash-rented lands ...	91,000	4,98,963	5 7 8	4,51,866	4 15 5
Occupancy and ex-proprietary cash-rented lands.	105,116	5,49,903	5 3 11	5,48,474	5 3 6
Sir ... ..	28,341	1,52,676	5 1 0	1,51,067	5 5 3
Khudkásht ... ..	26,613	1,32,445	4 15 7	1,32,141	4 15 5
Grain-rented ... ..	205,056	9,20,779	4 7 9	9,14,118	4 7 4
Nominally-rented ... ..	7,032	86,472	5 2 11	35,543	5 0 11
Total ... ..	463,158	22,91,238	4 15 1	22,33,209	4 13 2
Additions for sayer ... ..	...	11,730	...	11,730	...
Additions for fraudulent cultivation ... ..	8,638	22,745	2 10 2	22,115	2 9 7
Total ... ..	8,638	34,475	...	34,176	..
Total assets ... ..	471,796	23,25,713	4 14 10	22,67,384	4 12 10
Deductions for sir ... ..	...	16,754	...	17,582	...
Deductions for excess recorded cultivation ... ..	2,967	9,979	3 5 10	10,052	3 6 3
Total ... ..	2,967	26,733	...	27,634	...
GRAND TOTAL OF NET ASSETS ... ..	468,829	22,98,980	4 14 6	22,39,750	4 12 6

The total difference between the standard and corrected net assets amounts to only Rs. 59,230 or 2.61 per cent. In no parganas do the standard net assets exceed the corrected net assets, and the difference is only considerable in parganas Dáranagar and Kirátpur, where owing to the high rates paid by tenants-at-will, standard rates were framed with more moderation.

The revenue assessed.

74. The details of the revenue assessed on the tract under report will be found in Appendix II.

Owing to the constitution of new alluvial maháls, the majority of which have not been assessed by the Settlement Officer, a correct comparison cannot be made without

including Rs. 44,274, the nominal assessment of these maháls. The expiring demand of the 9th settlement was Rs. 8,81,392, and of the 10th settlement (including Rs. 397 for owner's rates which have now been absorbed) Rs. 8,20,358. The revenue as proposed by the Settlement Officer (including the abovementioned Rs. 44,274) was Rs. 11,05,293, and was composed of Rs. 10,32,837, revenue proposed on ordinarily-settled maháls, Rs. 11,020 on maháls settled for short terms, Rs. 9,755 on alluvial maháls specially settled for 30 years, and Rs. 7,407, revenue proposed on alluvial maháls which, as their roster year coincided with the year of inspection for assessment purposes, were settled by the Settlement Officer under Circular I-6. The revenue as now sanctioned amounts to Rs. 10,17,348 and, including the Rs. 44,274, and Rs. 5,305 for which sanction has not yet been received to Rs. 10,66,927, and gives an enhancement of 21·5 per cent. over the expiring demand of the 9th settlement and of 30 per cent. over the expiring demand of the 10th settlement. It consists of Rs. 9,94,914 sanctioned by Government on ordinarily-settled

\* Of this Rs. 4,270 has already been sanctioned reducing the Settlement Officer's proposals by Rs. 180. For Rs. 5,305 sanction is awaited.

maháls, of Rs. 11,005 sanctioned by Government on maháls settled for a short term, of Rs. 9,755 proposed on alluvial maháls specially settled for 30 years, and of Rs. 7,159 sanctioned by Commissioners on the alluvial maháls assessed by the Settlement Officer under Circular I-6. The enhancement varies from 16·5 per cent. in pargana Afzalgarh to 41·6 per cent. in pargana Seohara.

75. Though the principles of graduating the assessment of maháls in which the enhancement was very great was recognised from the beginning, no definite rules were laid down for the Settlement Officer's guidance. Consequently the progression in the earlier parganas were carried out in slightly varying ways, but in all cases where the enhancement exceeded 25 per cent. progressions were given. In the later parganas, however, progressions have been given in strict accordance with the latest orders of Government (G. O. No.  $\frac{1152}{1-3144}$ , dated the 13th April 1896). The following figures give the results of these progressions on the revenue actually sanctioned by Government, excluding the short-term maháls and alluvial maháls settled for 30 years :—

Period.						Demand.	Increase.
							Percentage.
First five years	...	...	...	...	...	9,12,746	19·9
Second five years	...	...	...	...	...	9,78,014	27·3
Final	...	...	...	...	...	9,94,914	30

NOTE.—These figures are for the permanent portion only.

76. The sanctioned revenue, including the nominal revenue of the alluvial maháls not now assessed, amounts to 46·41 per cent. of the net assets and to 47·6 per cent. of the standard. In 56 maháls the percentage exceeded 55 per cent. and in 391 maháls it fell below 45 per cent. Detailed lists of these maháls have been given in the pargana assessment reports and need not be further referred to. The chief reasons for the low percentage taken have been—(a) the impossibility of taking a full demand in many maháls owing to the enormous resultant enhancement, (b) the necessity for caution in assessing wholly or largely grain rented maháls, and (c) the necessity for making allowances for the large number of proprietors in *bhaiyachára* maháls and in maháls where the number of resumed revenue-free plots were excessive.

77. The incidence of the revenue per cultivated acre at last settlement was Rs. 1-14-7, and it is now Rs. 2-7-6, an increase of 29·1 per cent. But owing to the fact that there was a considerable and temporary decline in cultivation in the years of record, a fairer comparison would be with the incidence per assessed acre, or Rs. 2-4-5, giving an increase of exactly 19 per cent. It will thus be seen that though rents have risen something over 30 per cent. the incidence of revenue has not really risen 20 per cent. from which it would appear that, notwithstanding the enhancement, a very much smaller proportion of the gross assets than formerly has now been taken. The incidence varies from Rs. 1-14-1 per cultivated acre in the poor and backward pargana of Mandawur to Rs. 2-13-9 in the rich and

Progressive assessments.

Percentage of assets taken.

Incidence of the new revenue.

highly cultivated one of Nehtor. It may be interesting to compare this incidence and that of the rental incidence with those of the neighbouring district of Muzaffarnagar, as in the earlier parganas it was with this district that the results of the Settlement Officer's proposals were compared. In Bijnor there is practically 54 per cent. of the total area, cash-rented, and paying a rental incidence of at least Rs. 5-5-8; while in Muzaffarnagar at the last revision, there was 52.5 per cent. paying, an incidence of Rs. 4-12-4. In the absence of a personal acquaintance with Muzaffarnagar, it is not easy to compare the two districts; but apart from soil variations, it is probable that the causes of the higher rental rates of Bijnor are due firstly to the fact that Bijnor with a yearly rainfall 12 inches in excess of that of Muzaffarnagar is able to dispense with the canal irrigation, which is necessary there to supplement the deficient rainfall, and that consequently the landlords are able to take without pressure from the tenants that portion of the gross profits which corresponds to the irrigation dues; and secondly, that rents in Bijnor, owing to the constant changes between grain-rents and temporary cash leases, which take no account of occupancy rights, are much more in touch with prices. The incidence per assessed acre of the revised revenue in Muzaffarnagar was Rs. 2-3-5, and in the tract under report it is only Rs. 2-4-5. That is to say, with a rental incidence over nine annas higher than in Muzaffarnagar, Bijnor has a revenue incidence of only one anna more. So far, therefore, as the cash-rental incidence is a test of the rental capacity of a district, there is no reason to consider Bijnor to be heavily assessed, and it is largely owing to the want of permanence, which exists among the Bijnor cash-rents, that it has not been found possible to take a higher demand.

Results of the assessment on the large landholders.

78. The following table shows the effects of the new assessment on the estates of the chief families who possess landed property in the tract :—

Serial number.	Name of estates.	Number of entire villages.	Number of parts of villages.	10th settlement jama.	Assessable assets as calculated by Settlement Officer.	New Jama.			Percentage of new jama on assets.	Percentage of new jama on 9th settlement jama.	Percentage of new jama on 10th settlement jama.
						First five years.	Second five years.	Final.			
1	2	3	4	5	6	7	8	9	10	11	12
				Rs.	Rs.	Rs.	Rs.	Rs.			
1	Chaudhri Ranjit Sinha	110	10	61,715	1,58,349	69,242	73,787	75,602	47.7	17.4	22.5
2	The Tajpur Family ...	91	21	50,226	1,30,830	69,580	62,956	65,407	46.7	19.9	30.2
3	The Sahampur estate ...	103	10	38,406	1,02,674	46,295	48,215	48,781	47.5	11.0	27.0
4	Chaudhri Basant Sinha	64	21	18,052	60,009	23,440	25,761	27,234	45.3	29.7	50.8
5	Kuar Harbans Sinha ...	33	39	18,926	54,114	22,436	24,195	24,735	45.7	14.9	30.6
6	Chaudhri Ram Kuar ... Sinha of Kanth.	33	8	14,163	41,770	17,676	19,315	19,780	47.3	14.1	36.6
7	Mufti Tasadduk Husain, &c., of Kiratpur.	21	20	18,028	41,864	19,127	19,575	19,575	46.7	...	8.5
8	Rai Lakhan Sinha ...	28	...	16,058	38,803	18,430	18,715	18,745	48.3	41.8	16.7
9	Kuar Partap Sinha Haldor.	22	14	12,909	42,733	15,816	17,660	18,371	43.0	27.0	42.3
10	Kuar Tejbal Bikram Bahadur.	16	14	8,413	27,744	10,532	11,471	11,732	42.2	31.7	39.4
11	Soti Harbans Lal and brothers.	17	10	8,693	20,510	9,647	9,647	9,647	47.0	40.7	10.9
12	Mufti Ibrahim Husain, &c., of Kiratpur	5	24	6,803	21,135	9,290	9,530	9,600	45.4	23.7	41.1
13	Sahu Bhagwandas, &c.,	10	11	7,352	19,195	8,518	8,954	9,009	46.9	2.6	22.5
14	Chaudhri Jwala Singh,	12	4	6,914	17,340	8,119	8,119	8,119	46.8	18.3	17.7
15	Sahu Sansar Chand, &c.,	12	1	6,830	15,622	7,490	7,550	7,550	48.8	16.3	10.5
16	Chaudhri Amir Hasan Khan.	22	2	4,714	15,935	6,005	6,030	7,300	45.8	39.7	54.8
17	Raja Uday Raj Sinha of Kashipur.	10	5	5,454	16,093	6,687	7,122	7,272	45.1	110.5	33.3
18	Chaudhri Bhopal Singh	6	2	6,250	12,442	5,990	5,990	5,990	48.1	6.7	...
19	Sahu Chhajmal Das ...	8	5	3,478	10,793	4,526	4,896	5,051	46.7	22.5	45.5
20	Bani Dharan Kumar of Landhora.	7	5	4,405	10,230	4,990	5,120	5,120	50.0	...	16.2
21	Sahu Umrao Singh ...	6	8	3,015	10,251	4,327	4,627	4,627	45.1	2.9	18.1
22	Musammat Durre Nujaf Begam.	6	1	2,990	8,996	3,180	3,560	3,730	41.4	88.8	24.7
23	Mufti Ibno Hasan ...	1	6	2,607	6,428	2,956	3,146	3,146	49.9	2.6	23.6
24	Chaudhri Mubarik Sinha.	5	2	2,245	6,603	3,080	3,080	3,080	46.6	1.8	37.2
25	Sahu Ajudhya Parad ...	1	4	1,270	3,571	1,489	1,625	1,625	45.5	5.3	27.9
26	Chaudhri Maharaj Sinha	3	...	555	1,891	705	705	705	37.2	33.7	27.2
	Total	652	247	3,31,371	9,04,934	3,89,572	4,12,151	4,21,533	46.5	17.5	27.2

Except in the case of the estates of Chaudhri Basant Sinha Rai Bahadur of Seohara, and of Chaudhri Amir Hasan Khan of Sahespur, the enhancements are nowhere considerable, and apart from the fact that the percentage of assets taken is less in their cases than in that of almost any other large landowner, it has to be remembered that these estates have benefitted most by the opening of the Oudh and Rohilkhand Railway, resulting in a considerable increase in the cultivated area of their estates, and that the enhancement is much mitigated by progressive revenues.

79. The present enhancement of the revenue has been chiefly brought about by (a) the increase in cultivation, (b) the increase in assets due to irrigation, (c) the increase in rent-rates, and by (d) the inadequacy of the 10th settlement; but it is impossible with any accuracy to distribute this enhancement of Rs. 2,46,569 among them. In 1300 Faslî cultivation had risen by 9 per cent. but as a considerable portion of this increase relates to the low-rented parganas of Afzalgarh and Barhapura, the enhancement due to this cause cannot be more than Rs. 40,000. The increase in assets due to irrigation is of little account, amounting as it does at the highest estimate to only Rs. 1,500.

It is clear, therefore, that the major portion of the increase must be ascribed to the remaining causes, but owing to the absence of any figures showing the rent-roll estimated by Messrs. Palmer and Carpenter it is impossible to divide it among them.

80. At last settlement the engagements for revenue were taken in all cases for 30 years from the dates on which the assessments of the various villages were announced. The result has been that in most parganas the period of settlement ends on varying dates, and in many cases it extends as far on as 1,903 and 1,904 A.D. It is this want of method in fixing the periods of assessment at last settlement, that has led to the present absence of continuity in the assessment work, it having been obviously impossible for the present Settlement Officer to assess villages whose engagements still will not terminate for another four or five years.

Under the orders of Government the following years have now been fixed for the expiry of the present revision, and agreements have been taken from the various proprietors, for varying periods, to bring about the desired result :—

Tahsil.	Year of expiry of new settlement.
Bijnor ... ..	1,927 A. D.
Najibabad ... ..	1,927 A. D.
Dhampur ... ..	1,928 A. D.
Nagina ... ..	1,928 A. D.

81. The assessments of parganas Bijnor, Dāranagar, Mandawur, Akbarabad, Kiratpur, and of the open country of Najibabad, came into force from the 1st July 1897, and the assessments of pargana Nehtor, Dhampur, Seohara, and of portions of parganas Afzalgarh and Barhapura from the 1st July 1898. Both years have been very fair average years, and no difficulty has been experienced; but as owing to progressive assessments only a portion of the enhancement has as yet been taken, it is much too soon for any hardship, if hardship there has been, to be brought to light.

## CHAPTER VI.

### MISCELLANEOUS.

82. The majority of the alluvial mahāls of the tract have not been assessed by the Settlement Staff. There were a large number of mahāls on the registers; but in many cases the assessments had never been revised, and generally the provisions of Circular I—6 had not been fully carried out. The period of assessment for mahāls in the same pargana consequently seldom coincided, the portions of villages liable to fluvial action had not been separately assessed, and as the roster also required revision, special arrangements for the whole tract were proposed and sanctioned. Under these arrangements the Settlement Department was only made responsible for the assessment of those mahāls whose year of revision coincided with the year of inspection for settlement purposes. But circle rates were framed for all the circles, new alluvial registers prepared, and a record-of-right drawn up for all the mahāls.

Causes of the enhancement.

Period of settlement.

Working of the new assessment.

Alluvial mahāls.



Other work carried  
out by the Settle-  
ment Department.

83. In addition to the settlement record required under Rules 40 to 43 of Circular 15 of the 7th September 1894, the Settlement Department has also prepared a scheme for the revision of patwáris circles and salaries has prepared new mauza registers and pargana-books, registers of revenue-free grants and of malikána allowances, and is now engaged in preparing the pargana hand-books.

Litigation.

84. Appendix IX gives the statistics of the litigation dealt with by the Settlement Courts. The number of cases actually instituted was not large, nor with the exception of cases connected with commutation, enhancement and abatement of rent, was the work at all heavy. Miscellaneous cases include every kind of miscellaneous record that has been dealt with during settlement operations. The majority of these cases should never have been shown in this statement, but it is now impossible to separate them. Disputes as to proprietary rights were not numerous. The majority of those instituted however were fought out. The same remarks hold with regard to disputes as to a right of occupancy. Rent cases, owing to the absence of any recognised rent-rates in the district, proved the most difficult portion of the work, and these, with the exception of a few cases decided by the Assistant Settlement Officer, were decided entirely by the Settlement Officer. The number of cases by no means represents the amount of work to be disposed of, as in almost all, the tenants of whole villages and maháls were concerned. Altogether the rents of an area amounting to 43,530 acres were commuted to Rs. 2,14,462 or an average rent-rate of Rs. 4-11-2. In deciding these cases the rates used by the assessing officer in valuing the lands were almost invariably used, there being indeed no other rates. In most cases the landlords have acquiesced in these commutations, the number of appeals being only 44, but there is little doubt that they are actively hostile to the introduction of fixed cash rents, and as the Settlement Officer has no power to interfere with the rents of non-occupancy holdings, or of waste lands it is extremely probable that, within a very short time, under the pressure of ejection from these lands, a reversion to grain rents or temporary cash leases will, in many instances, take place. The number of cases in which an application for abatement of rent was successful was very small owing to the orders of the Board of Revenue, which directed that the Settlement Officer should only grant abatement on the grounds given in section 15 of Act XII of 1881. Enhancements of rent were equally unsuccessful as the rents of occupancy tenants in Bijnor are generally fully up to the standard of non-occupancy rents. The constant alternations between grain and cash rents account for the number of rent disputes. Altogether 24,396 cases were disposed of which 12,313 were decided on their merits.

Appeals.

85. Appellate work was very light. Even excluding the large number of miscellaneous cases, cases connected with patwáris, and cases originally tried by the Settlement Officer, not 2 per cent. of the cases instituted have been appealed to the Settlement Officer. Of these the judgments in the lower courts were upheld in 144, reversed in 55, and 9 were sent back for further inquiry. The absence of any appeals to the Settlement Officer against the distribution of assessment, has been due to the fact that in the earlier parganas the Settlement Officer kept the final sanctioning of the distribution in his own hands, while in the later parganas the parties were given time by the distributing officer to consider the results of the distribution and to point out any case of hardship, before final sanction was accorded. These results speak well for the thoroughness with which the Deputy Collectors and the Assistant Settlement Officer have carried out their judicial duties, and show the confidence the people have had in their decisions.

Objections against  
assessment.

86. Up to date 120 appeals have been filed against the assessments. Of these 111 have been decided, in only seven of which has the revenue been altered. It is impossible to give the actual amount by which the final revenue will be eventually reduced, but it is not likely to amount to more than a few hundred rupees.

Dates on which assess-  
ment reports were  
submitted.

87. Settlement operations were commenced in the cold weather of 1893, and the last assessment report of the tract now under assessment, that of pargana Afzalgarh, was submitted on the 21st October 1897. The other reports were submitted

as follows :—Dáranagar, September 1895 ; Akbarabad and Kiratpur, January 1896 ; Bijnor, April 1896 ; Mandawur, June 1896 ; Nijababad, June 1896 ; Nehtor, February 1897 ; Dhámpur, April 1897 ; Seohara, June 1897 ; Barhapura, August 1897 ; and Afzalgarh, October 1897.

88. Owing to the fact that the assessment of a considerable portion of the district has not as yet been revised, it is impossible to accurately determine the actual cost per square mile. Up to the 30th September 1898, the cost of the settlement operations has been, as shown below, Rs. 2,19,879-3-6, including an item of Rs. 9,896-7-9 expended on the survey of forest villages by the Survey Department which was not included in the estimate originally framed by the Board of Revenue :—

Cost of operations.

Rs. a. p.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
56,247 15 2														
15,874 3 1														
20,209 12 5														
30,785 0 6														
26,352 11 1														
26,398 4 7														
9,148 6 0														
1,472 10 9														
13,169 14 1														
7,203 11 0														
1,468 7 8														
12,428 3 2														
*2,19,879 3 6														
150 6 3														

\* Includes Rs. 9,896-7-9 spent on surveys carried out by professional agency.

Of the total area of the district all operations have been completed in 1200·59 square miles, all operations except the actual assessment in 271·21 square miles, and in 405·84 square miles, though the survey has been completed, the work of preparing the record-of-rights is still going on. Excluding this latter area, the cost of the operations comes to Rs. 150-6-3 per square mile, and excluding the cost of the survey of the forest villages to Rs. 143-10-0, which compares very favourably with the estimate of Rs. 150-0-0 per square mile originally fixed by the Board of Revenue. No deductions have been made for receipts as no such deductions were contemplated in the Board of Revenue's original estimate. It was fully expected that the cost per square mile would have been very considerably below the estimate framed by the Board of Revenue, and but for causes beyond the Settlement Officer's control, resulting in a considerable break in the continuity of the operations, there is little doubt that this expectation would have been realized. In August 1895, at a time when the whole of the operations of preparing a record-of-rights were in full swing, orders from Government were received, stopping the preparation of these papers for the parganas that had not then been taken up, and it was not until the end of 1897 that further orders were received, directing the preparation of a record-of-rights for the whole district, and necessitating the re-engagement of the greater portion of the staff.

89. The rules require that the Settlement Officer should make an estimate of the expenditure under the two heads "assessment" and "record work" (including litigation); but the work under the two heads is so much intermingled that it is not at all easy to say how much of the expenditure should be charged to each head.

Cost of record work and assessment.

The following statement represents the nearest approximation that can be given :—

Description.	Total cost.	Cost per square mile.
	Rs. a. p.	Rs. a. p.
Assessment ... ..	86,760 11 9	58 15 3
Record work ... ..	1,33,118 8 6	91 7 0

The greater portion of the salaries of Settlement Officer and the Assistant Settlement Officer and the whole of the cost of the English office have been debited to assessment, while the greater portion of the Vernacular office and the whole of salaries of the Settlement Deputy Collectors have been debited to record work, and all

miscellaneous expenditure such as rents, purchase of tents, furniture, and the like, has been divided equally between the two.

Services of officers.

90. From the 13th November 1893 until the 30th November 1894, when I took over charge, the Settlement was under the supervision of Messrs. Fraser and Piggott, Collectors of the district. I have retained control of the operations until now, except for 4½ months (21st July 1896 to the 22nd October 1896, 1st September 1898 to the 15th October 1898) when I was on privilege leave, and the charge of settlement was held by Messrs. Streatfeild and Clarke, Officiating Collectors, in addition to their other duties. From the 15th April 1895 to the 8th November 1895, and from the 15th April 1898 until now, the charge of the district has also been in my hands.

Of the total area assessed 309·7 square miles or roughly one-fourth was assessed by Pandit Rama Shankar, Assistant Settlement Officer. The assessment of the remainder, in addition to the revision of the assessments of the Assistant Settlement Officer, has been carried out by me.

The Assistant Settlement Officer.

91. The services of Pandit Rama Shankar, Statutory Civil Service, were placed at the disposal of the Settlement Officer from the 13th November 1893 to the 13th March 1896. The work of starting operations fell almost entirely upon him, and the good progress made and the excellent state of the records bear witness to the care and trouble he had expended on this most important branch of the work. In addition he inspected and assessed the parganas of Akbarabad, Kiratpur, and Dhampur, and supervised the field work of parganas Seohara and Afzalgarh. I cannot speak too highly of the zeal and ability with which this officer has carried out all the duties entrusted to him, and his previous knowledge of all branches of settlement work was of the greatest assistance to me.

Deputy Collectors.

92. Of the Deputy Collectors, the late Munshi Ashfak Husain, Mfr Imamut Husain, and Munshi Muhammad Ahmad worked but a very short time under me. I was very satisfied with what I saw of their work. On Munshi Farid-ud-din Ahmad Khan fell the brunt of the attestation, distribution, and case work, he working right through the settlement from April 1894 until May 1898. He is an officer of much industry and ability. His judicial work was sound and thorough, and the small number of appeals filed against his decisions testify to the care with which this officer carried out his duties.

Pandit Bisheshwar Dayal Chaturvedi, B. A., joined the district owing to the re-starting of the attestation work of the five parganas previously assessed on unattested records. He has completed the whole of this work and is now engaged in carrying out the attestation and case work of the four parganas, whose assessments have not yet fallen in. I have a very high opinion of Pandit Bisheshwar Dayal. He is an officer of considerable ability, hard-working and of high character, and his work fully bears out the reputation he had acquired before joining this district.

Subordinate staff.

93. Of the officers of the subordinate staff it is impossible to more than mention the Head Clerk, Bābn Ajudhya Prasad, B.A., and the Superintendent of the Vernacular office, Munshi Sri Ram, though with hardly any exception they have all worked well and diligently. Both these officers are men of exceptional intelligence and ability, and are well fitted for the higher posts for which I have recommended them.

DATED BIJNOR :

The 16th March 1899.

F. J. PERT, C.S.,

Settlement Officer.

## APPENDICES.

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1. Comparative area statement.
2. Statement of proposed and sanctioned revenue.
3. Statement of rent-rolls and collections.
4. Statement of attested rent-roll.
5. Statement of soil classification and standard rent-roll.
6. Statement of crop statistics.
7. Statement of corrected rent-roll under different classes of tenure.
8. Statement of agricultural statistics.
9. Statement of litigation.



## APPENDIX III.

Statement No. III—Renters' Rs. and Subm. Rs.

Year.	Tenants land held in—						Collections, including 3 and 5).		Sir.		Khudhásht.		Total.		Shik má.	
	Cash.		Kind.													
	Area.	Rent demand.	Area.	Rent demand.	Area.	Rent demand.	Area.	Rent demand.	Area.	Rent demand.	Area.	Rent demand.	Area.	Rent demand.		
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1																
Foner settlement (1275F.) Average of 12 years Year of verification	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	* 157,263	8,01,881	225,556	5,75,239	13,77,120	...	34,555	13,892	32,897	16,732	238	450,034	14,09,142	38	85	
	* 249,880	13,80,040	159,363	4,94,025	18,74,065	...	7,439	4,670	45,596	23,278	17,594	463,269	19,16,007	6,333	20,579	
	196,239	10,49,905	* 212,192	...	10,49,965	...	28,372	2,171	26,660	3,779	15,120	† 463,463	10,71,035	7,593	17,658	

\* Include zabti rented area.

† Includes 305 acres for grove land.

## APPENDIX IV.

The following statement shows the classification of holdings and rentals as obtained from Statement No. IV.

Description of holdings.	Last settlement.		Present settlement.				Under-tenants.		Remarks.	
	Rent.		Cash.		Grain.		Cash.		Grain.	
	Area.	Rent.	Area.	Rent.	Area.	Rent.	Area.	Rent.	Area.	Rent.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
1	2	3	4	5	6	7	8	9	10	
Sir	...	...	...	...	...	...	...	...	...	...
Khuddásh	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	...	...	...
Expropriatory tenants	...	...	...	...	...	...	...	...	...	...
Occupancy tenants	...	...	...	...	...	...	...	...	...	...
Non-occupancy tenants	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	...	...	...
Rent-free	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL OF TRACT UNDER REPORT	...	...	...	...	...	...	...	...	...	...

NOTE.—The difference in rental and area between these figures and those given in Appendix III is due to the fact that these are attested figures for the whole tract under report.

## APPENDIX V.

Statement No. V.—Standard Rental and classification of soils.

District.	Bara.				Sawai.				Matyur.				Bhur Sawai.				Bhur.				Total.					
	Wet.		Dry.	Rental.	Wet.	Dry.	Rental.	Wet.	Dry.	Rental.	Wet.	Dry.	Rental.	Wet.	Dry.	Rental.	Rental.	Addition for excessive cultivation.	Addition for excessive cultivation.	Net valuation at standard rates.						
	Area.	Rental.																			Area.	Rental.	Area.	Rental.	Area.	Rental.
	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.	Ac.	Rs.					
Bijnor ...	620	6,000	973	9,930	54,715	4,01,628	1,56,808	11,28,769	19,838	80,574	87,210	3,15,042	6,524	21,388	62,196	1,87,876	985	1,881	44,263	79,455	11,730	22,445	17,582	10,052	403,829	22,39,750

Area  
rentals

## APPENDIX VI.

Statement No. VI.—Comparative Crop Statement.

Period.	Rabi.										Kharif.					Dojua.	
	Total area per khasra.										Total.						
	Wheat alone	Wheat in combination.	Barley alone and bajra.	Gram.	Pear and masur.	Bajra.	Total.	Cotton alone and in combination.	Sugarcane.	Rice.	Wheat and chaff, both in combination.	Wheat alone and in combination.	Wheat alone and in combination.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Former settlement ...	Acres. * 440,235	Acres. 81,645	Acres. 21,351	Acres. 19,719	Acres. 13,293	Acres. 16,742	Acres. 14,604	Acres. 167,254	Acres. 35,155	Acres. 33,154	Acres. 109,392	Acres. 7,076	Acres. 32,301	Acres. 29,800	Acres. 7,848	Acres. 261,981	Acres. ...
Average of five years ...	480,823	70,593	58,383	38,426	34,792	21,774	103	224,071	26,153	P. 50,698	154,983	16,491	32,135	27,158	12,367	314,830	88,075
Year of verification ...	+ 450,431	65,628	53,645	34,472	31,732	13,702	4	199,183	20,801	P. 24,845	155,330	13,504	29,260	23,069	6,000	323,768	72,515

\* Includes 19,826 acres revenue-free.

P. Pandra or land prepared for sugarcane.

† Includes 18,292 acres revenue-free.

## APPENDIX VII.

The following statement shows the corrected rent-roll under different classes of tenure (Statement No. VII.)

District.	Tenants-at-will cash area.				Ex-proprietary and occupancy cash area.				Sir.				Khudkashit.				Grain-rented.				Nominally rented.				Addition for fraudulent cultivation.				Deduction for excessive cultivation.				Total assessable assets.				Revenue as now proposed.
	Area.	Rs.	Recorded.	Accepted.	Area.	Recorded.	Accepted.	Rs.	Acres.	Rs.	Acres.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental by applied rates.	Area.	Rental.	Rs.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32						
Bijnor,	91,000	509,113	498,963	105,116	5,41,232	5,49,903	28,341	1,52,676	26,613	1,32,445	205,056	9,20,779	7,932	36,472	11,730	8,633	22,745	12,441	16,754	2,967	9,979	408,829	22,98,980	10,66,027	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.							

## APPENDIX VIII.

Agricultural Statistics.

District.	Description.	Number of villages.	2,016	3,547	768,378	Acres.	1,541	10,869	Acres.	Area covered by inhabited sites.	Average area occupied by each site.	Ac.	7	Masonry wells.		43,734	121,362	Acres.	432,139	Ac.	10	463,463	Ac.	4	Agricultural population.		Non-agricultural.		Remarks.
														Old.	New.										Former.	Present.	Former.	Present.	
Bijnor	Total of tract under report,	2,016	3,547	768,378	Acres.	1,541	10,869	Ac.	7	2,219	607	43,734	121,362	Acres.	432,139	Ac.	10	463,463	Ac.	4	198,276	232,596	334,985	344,065	Present.	Former.	Present.	Former.	

Note.—Population as mentioned in paragraph 14 is for the whole district.





## ORDERS OF GOVERNMENT.

No.  $\frac{3377}{I-151B}$  OF 1899.

### RESOLUTION.

REVENUE DEPARTMENT.

*Dated Naini Tal, the 28th September 1899.*

READ—

Letter No.  $\frac{1953N}{I-31A}$ , dated 1st September 1899, from the Secretary to the Board of Revenue, North-Western Provinces and Oudh, submitting the Final Settlement Report of the Bijnor District, by Mr. F. J. Pert, I.C.S., together with a review thereon by the Commissioner, Rohilkhand Division.

OBSERVATIONS.—This report refers to the assessment of eleven parganas of the district of Bijnor. The assessment of the remaining four parganas of the district could not, owing to the date at which the assessments of last settlement expire, be framed by the Settlement Officer. These latter parganas will be dealt with in 1900 and 1901, and care should be taken that the necessary orders for the revisional operations are issued in good time.

2. The earlier settlements of the Bijnor district were, as compared with other districts, severe, and, at the same time, the revenue was unevenly distributed. In the settlement which has just expired a reduction in the total revenue of the district was considered necessary. The assessments then determined were generally moderate, but, though criticised at the time on the ground of inadequacy, they do not appear to have been unduly lenient.

3. There has been comparatively little change in the conditions of the district during the period of the settlement. Cultivation for a time showed an increase of about 10 per cent. over the figures of the last settlement, but had fallen again to very nearly its old level when the records were prepared for the revisional operations.

Irrigation is comparatively little resorted to in this district, only 25,000 acres in the whole tract now dealt with being classed as irrigable. The Oudh and Rohilkhand Railway has, since the previous settlement was made, been taken through a part of the district, and there has been some improvement in the methods of cultivation, which is most marked by the large increase in the area under sugarcane and rice. The purchasing value of the rupee has risen, according to the Settlement Officer, by 25 per cent., and rents have increased by about 20 per cent.

4. The assessment of the Bijnor district would, in any circumstances, be a difficult task requiring much care and judgment for its successful completion, owing to the large area of precarious tracts and the small extent of irrigation; but the difficulty is greatly increased by the exceptional character of the rental arrangements which prevail in this district. Over the greater part of the area assessed, rents are still taken in kind, a few special crops paying fixed money rents. In many cases these arrangements are superseded for a term by the lease of

the whole village for a definite payment in cash. These leases are often given in Bijnor to what has been described as a "syndicate of the leading tenants," and the whole sum payable to the landlord is then distributed, generally by arrangement amongst the tenants themselves, over the cultivated area of the whole village. Occasionally the landlord agrees with individual tenants to pay a fixed rent, but such rents are not as yet prevalent over any large area, and they have no permanence, the landlord's right to revert to a grain rent on the expiry of the fixed term being generally recognised. The nature of these arrangements has not always been understood by the courts, and the decrease which has occurred in the area held by occupancy tenants may be attributed in part to the fact that under such a system occupancy rights are rendered less valuable and proof of their having accrued becomes more difficult.

5. In such a tract, where the assessment had very largely to be made on assumed rates, based upon cash rents of the temporary and exceptional character described, it would have been well if the system now followed of submitting rent rate reports before commencing assessment had been in force. This system, however, had fallen into disuse. It was left to the Settlement Officer to work out and apply his rates himself; and in his earlier assessments he was guided too strictly by rates derived from the cash rents, which were too high for application to the large, and generally unprotected, grain-rented areas. Considerable reductions had in consequence to be made in the assessments originally proposed. Even after these reductions, and with the more lenient method of assessment subsequently adopted, the Board appear to incline to the opinion that the valuation of the grain-rented area is full, if not high, and the rate at which its assets have been assumed, Rs. 4-7-0 per acre for the district, as a whole, is certainly not unduly moderate.

6. The Lieutenant-Governor agrees with the Board that the area assessed is a full one, and that the rates applied in valuing the assets of the assumption areas are sufficient. A considerable addition was made to the rent-roll on account of *sáyar*, and the total assessable assets were estimated by the Settlement Officer as being close upon 23 lakhs of rupees. The assessment, which amounts to Rs. 10,66,927, takes 46.41 per cent. of the assessable assets, the comparatively low percentage being due, as the Board point out, to the fact that in many cases the Settlement Officer's estimates of assets were considered too high. The increase over the present revenue demand is 30 per cent. The enhancement will not be taken all at once, but by progressive stages, beginning with an increase of about 20 per cent. on the former *jama*. The full revenue will be taken in the eleventh year.

7. The assessment now proposed is one which the landlords should have no difficulty in meeting, provided there is no change in the agricultural condition of the district, more especially in the matter of the cultivation of sugarcane, and it is, at the same time, as full a demand as could fairly be imposed. The Lieutenant-Governor accordingly confirms the assessment for the periods mentioned in the last paragraph of the Board's letter.

8. The cost of the settlement has been slightly over two lakhs of rupees, and falls at about Rs. 150 per square mile.

The work has been carefully done by Mr. Pert and his Assistant, Pandit Rama Shankar Misra, though there may have been a tendency at the outset to place the assessments at a somewhat high figure.

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ORDER.—Ordered that a copy of this Resolution be forwarded to the Secretary to the Board of Revenue, North-Western Provinces and Oudh, for the information of the Board.

J. O. MILLER,

*Chief Secy. to Govt., N.-W. P. and Oudh.*





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