

1834, and by the voluntary action of landlords and tenants, and has therefore remained permanent. Forced changes have no vitality in them.

"(10.)—No European officer can satisfactorily fix money rents on every field in a village in a batai pargana, where perhaps there are no money rates within miles to which he can look as example. His average soil rates may be perfectly accurate over large areas, but they are only average rates after all, and will probably be much too high or too low in individual fields."

Examined.

34. I think Mr. Moens has here pleaded every argument in favour of batai which could be raised, and I also think that his pleading breaks down when tested by the light of actual facts, such as those I have been watching in this district for nearly three years. First, he says that cases where tenants are delayed in dividing the crops are very exceptional, and an easy remedy will soon be provided. My experience is that such cases are not at all rare, unless by a piece of special pleading he is made out to refer only to very extreme cases, such as that he mentions above. I admit that it is rare to find cases where "the grain has been kept lying till it all rotted;" but I state as fact that it is not at all rare to find the tenants watching their uncut fields deteriorate day by day either because the landlord has never come to estimate the crop, or because till they assent to his terms he will not give permission to touch them. My own experience over a large part of Hasanpur and Amroha was that in every other village which I rode through the cultivators came running up and begged for permission to cut their fields, or for an order directing the landlord to estimate the crop before it deteriorated. I am quite willing to allow that in most cases the cause was indolence, and in some niggardliness, rather than actual malevolence. The landlords are mostly non-residents and often grudge the money necessary to maintain a sufficient establishment to complete the estimation in several different villages within the proper time, and before the day the landlord has bestirred himself, or the agent worked round to the village, damage occurs to the crops. But be the cause what it may, the fact of damage and loss to the tenant still remains, nor have I ever known a single case in which the landlord has, without compulsion, made any restitution for this loss. By an illogical process of reasoning he makes out that his own loss balances that of the tenant, and I found one case where the crop having been injured by hail, which might have been avoided had the tenant been free to cut when he pleased, the zamindár (a Bania of Hasanpur) urged that he ought to be allowed to recover the value of his *full* share as the crop before stood from the tenant at the next harvest, on the ground that his revenue had not been remitted (the injury to the whole holding being slight).

35. The easy remedy Mr. Moens mentions lies, I suppose, in the rules passed by the Board under Act XVIII., by which a tenant whose batai is delayed can apply to have it made through the courts; but, strange to say, the remedy is found so much the reverse of easy that the tenants will stand almost any amount of bullying before they resort to it. One of the great drawbacks to it is the delay which invariably occurs, and during which the crop is very likely ruined. Another, the almost invariable failure of the officers who take up the case to compensate the tenant for such injury, or even to restore him the actual costs of the application, and, most important of all, the very cold reception given to petitions of this nature by the already over-worked tahsildár, on whom they almost always fall.

As an example of what I say I give an actual case. Lachhman, tenant of a village in Hasanpur, came in on the 7th November, 1879, to Morádábád, and gave in a petition to the effect that the zamindár refused to make any amáldári of his crops or to let him cut it, and that he therefore requested batai. He came in, be it observed, 36 miles, because, as he told me afterwards, it was quite useless to present such petitions at the tahsil; he would have been hunted out with abuse if he had done so. The revenue court, taking the petition, sent it out to the tahsildár for disposal, as is commonly done

and must be done till European officers are relieved from some of the paper work they now do and have leisure to really look after the people in their villages. The tahsildár immediately on receipt without taking any steps to get the matter right, struck it off the file, on the ground that no talabana stamp had been attached. Meanwhile about ten days after his first application, Lachhman gave in another at the court in Morádábád, and this also went out to the tahsildár. The latter's procedure being still uncertain and dilatory, Lachhman a few days later applied to the Assistant Settlement Officer, who took up the case. On this the tahsildár, probably seeing that the case could not be summarily thrown out again, began proceedings, and sent out the kúrk amín, who after sending for the parties made an estimate of the crop by arbitrators in the absence of the zamindár, who, as usual, did not attend. The final result of the case was that about two months after he first applied Lachhman got batai made of his crops, which had however by that time diminished from over 40 maunds, at which the patwári estimated it, to 4½, out of which the zamindár took about one-third. The zamindár in this case pleaded before the Assistant Settlement Officer, that he had made a moderate estimate of Lachhman's fields at the same time he made that of the other tenants, and the patwári confirmed this; but my enquiries in the matter led me to the certain conclusions that the tenant's tale was true. In the first place it is hardly conceivable that, if the zamindár had really estimated the fields moderately, the tenant would that very evening have rushed off to the courts in Morádábád, 36 miles off, and have fought through the case, seeing his crop ruining and spending money on stamps and petitions.

In the next, the motive for the zamindár's conduct was clear, as he had ill-will against the tenant, who was an ex-zamindár, and who had applied for commutation. Without doubt he merely wrote down the tenant's name on his list, leaving the estimates blank, and telling the latter that if he cut the crop till he got permission he would be the worse for it, and then when the case came up he filled in the amount at a very moderate estimate in the blank space on the list.

The easy remedy is I fear dreaded by the tenants as much as the evil it was devised for, and I do not think that the rarity of the application made to enforce it can be considered any proof of there being few occasions in which a remedy is required.

36. Going over the advantages of batai, I fail to see any in the fact first stated. The second amounts to saying that it is an advantage to be paying so high a rent, that no one could possibly pay more, and make a living by the land. As regards No. (3) I have not seen any improvements made by landlords in batai villages except locating tenants, and this they do just as much where cash rents are prevalent. As regards (5) it holds good where actual batai is made, but not with amaldári, where the zamindár often realises his rent in money some weeks after the crop is cut and where arrears are quite common. As regards (6) it all depends on the state of feeling between the zamindár and the tenant, and so it does in a cash village (7). As far as I have seen, the zamindár is not only just as pressing as the Bania, but has the great advantage of having a firm grasp on the crop and very seldom has to wait as long for payment as the Bania does. (8) I totally deny. I could almost always recognise a cash-paying village in Hasanpur by the superior cultivation and well-to-do look of the abádi and people; and so far from the batai villages being better supervised, the landlords rarely themselves visit them, whilst the less often the karindas and their underlings do so the better for the people. As regards feeding the cultivators the empty houses in Amroha tell another tale; whilst in a cash-paying village the cultivator would in such a scarcity as 1877 be almost always able to support himself. The only real advantage is therefore that mentioned in para. 4, which I allow, but which does not balance the evils.

37. As a further exposition of actual facts noted and commented on by an officer who thoroughly knew the country he was writing about, I must here give Mr. Crosthwaite's view of the batai question and of the general condition of the tenantry.

in Morádábád. The extract is taken from a report sent to the Commissioner of Rohilkhand in October, 1874 :—

"2. There is no doubt that a very ill-feeling does exist in many villages of this district between the landlords and their tenants. At present the Morádábád pargana is most noticeable in this respect, but that may only be because settlement operations have gone further there than elsewhere.

"3. I have formerly served in the Bareilly district, and I think there is no doubt that in Bareilly and Morádábád, and probably in Rohilkhand generally, the tenantry are more ground down and held in subjection by the landlords than they are in the Doáb.

"4. The great cause of this is, I think, to be found in the characters and habits of the landowners, and the tenantry landowners in Rohilkhand are very often absentees, and in very numerous cases are persons unconnected by any personal or tribal ties with the land or the occupiers of it. The habit of leasing entire villages to farmers is, as you are aware, a very general one in these districts, whereas in the Doáb it is happily very rare.

"5. The tenantry in Morádábád are a much less sturdy and fearless set of men than the Thákur and Bráhmaṇ or Ját peasantry of the Doáb. The batai and kankút systems have held their own in Rohilkhand to a great extent, and, as a consequence, the tenants are much more at the mercy of their landlords, have profited much less by the rise in prices, and have much less knowledge of their rights than they have in the Doáb. As to education, they have none of any sort. A very large proportion of them are nominally Muhammadans; but the greater number have none but the vaguest idea of the religion they profess. In ignorance, however, I do not think they are below the peasant of the Doáb. Our village schools, paid for as they are by the agricultural population, fail everywhere to give that population any benefit in return, and are really kept up for the use of the Banias and Kaiaths, who contribute nothing to them but the scholars.

"6. The principal cause of the state of subjection and degradation in which the peasantry are, is, I think, the batai system. The zamindárs use this system, and, I think I may say without injustice, value it also as an instrument of oppression. If the grain is to be divided, they keep the grain in the threshing floor for weeks and sometimes months, in order to punish the tenants for any sort of opposition. They keep the tenant waiting for days and weeks, sometimes out of sheer neglect, because they have to be away at a funeral, or a feast, or a fair. They have raised the share by various additions and exactions, until it is much more than it was originally. If the share is nominally one-third, the tenant will seldom get off under two-fifths or half. Club-men and watchers are kept to prevent the cultivators from touching the grain until it is divided, and the cost is thrown on the tenant.

"7. If the crop is valued and the share paid in money, the complaint of unfair dealing is universal.

"8. On my coming to a batai village to inspect it, I am usually surrounded with men clamouring for redress and for commutation. They know that it will be war to the knife with the landlord afterwards, but still they prefer to risk anything to escape from their present state.

"9. Accordingly last year tenants from about eighty villages in the Morádábád pargana obtained commutation of rent, and I have registered applications from twenty more villages in that pargana and from upwards of one hundred in Thákurdwára.

"10. The zamindárs have in almost all cases protested against the commutation, for the most part holding sullenly aloof from the proceedings when I explained to them that the law did not give me power to stay the commutation on their objection.

" 11. In many of the villages, more than I had ventured to hope, matters have settled down pretty quietly; in others the zamindárs have proceeded to harass the tenants who got commutation, by every means in their power.

" 12. Many, if not most, tenants have some land on which they have no occupancy rights. The zamindárs have at once ejected them from these lands. Their next step is to prevent them from grazing their cattle on the waste land. In most villages now it is the custom to charge a rent for grazing in the waste. The zamindár has sometimes let the waste to men of neighbouring villages in order to punish his own tenants.

" 13. It is universally the custom to permit the tenants to cut babul trees growing within, or on, the border of their fields for agricultural purposes. Such trees would never find root there at all if it was not the tenant's interest to protect them, and I doubt if in ninety cases out of a hundred permission is asked before using them. After commutation the zamindár endeavours to prevent the tenants from cutting them, and threatens them with the civil court.

" 14. Proceedings of this sort, and especially the evictions have created a good deal of ill blood, and in many cases I fear the end will be disastrous to the tenants, as it generally is to the poorer side.

" 15. Another great cause of ill-will is the attempt of the zamindárs to record numerous and extravagant dues. They entered lists of these '*abwáb*' to be recorded in the *wajib-ul-arz*, and on hearing of it the tenants of many villages came *en masse* to object. To show you the kind of demands that were made, I quote the following list put in by the zamindár of Malahpur.

" From cultivators the following *abwáb* are taken :—

From each asámi	...	{ Two nets of bhúsa each harvest. One net of cowdung fuel.
For each plough	...	{ Half a seer of hemp. Do. maund of parched grain. Do. do. of parched wheat. Do. do. of parched rice.
For each field of sugar,	{	One jar of ras. 25 canes.

" The zamindár is entitled to buy grain from the asámis, and to get one seer more per rupee than the market price. If any *abwáb* is not paid, the asámi is to pay the sum of Rs. 2-8-0 in lieu of it.

" Any grain or wood required by any of the zamindárs (of whom there are 16 living 20 miles off) is to be carted free of expense to the house of such zamindár, or else the cartage is to be paid by the asámis.

" This is an extreme example. But the demands for bhúsa, cowdung, &c., were universally made by the zamindárs and almost universally opposed by the cultivators.

" 16. Mr. Smeaton and I made local enquiries as to these cesses in many villages, and I took every occasion to ask zamindárs of respectability concerning them. The conclusion we came to was that no doubt dues of this sort were and are in some cases given, but by no means universally, even in the same village. The zamindárs never hitherto recorded them, and have not, as a rule been able to recover them by suit. In some cases they have got decrees for them from the civil courts, and decrees for cowdung have been given by the revenue courts of this district, the suits being laid for the recovery of rent of grazing land.

" I summarily stopped all these squabbles by refusing to record any dues of this sort as not being cesses under the meaning of the Act. I made my order as widely known as possible, publishing it in the local paper. So far as I know, it has not been appealed, and the disputes on this head have ceased.

"17. I have mentioned above that it is now a common practice to exact rent for grazing on the waste-land. *This is a modern practice, and is regarded with much bitterness* by the tenants. All waste grass land in this district is worth between Rs. 1-8-0 and 2 per acre. It appears to me strictly within the right of the zamindár to let it if he can get rent for it, and I have always upheld his right.

"It is, however, the cause of much ill feeling, more especially when the land is let to outsiders to the exclusion of the resident cultivators. This latter course is seldom adopted except out of malice.

"18. The patwáris' papers are, as a rule, very incorrect, or, more accurately speaking, they are altogether wrong. You know how the native civil judges cling tenaciously to any little bit of documentary evidence, as a drowning wretch clings to a straw. It never would enter the brain of a munsif to doubt a document of any sort, more especially a paper prepared by the man who is fictitiously called the 'sworn accountant' of the village. A civil court rather prides itself on having taken the trouble to examine the patwáris' books at all. After examining them it is only natural to deliver judgment according to them. Hence it was the easiest thing in the world to get decrees for ejecting tenants as having no right of occupancy. Many suits were filed as soon as our khatauni had been prepared.

"19. I had taken great care to make the zamindár and patwári parties to every entry in the khatauni, and I had hoped that it would be impossible for the zamindár to elude the attestation.

"20. But this was only my own ignorance. They pleaded that they had been forced to sign the settlement papers against their will, and this plea was accepted as good without any proof being asked for or any enquiry being made.

"The decrees for eviction were founded entirely on the patwáris' papers. In some cases not a single number recorded by the patwári in the tenant's holding had ever been in defendant's possession. He was ejected from his land by decrees which referred to land that he did not hold at all.

"Of course he did not plead this, because he did not know it, and could not pay lawyers to discover it for him.

"21. The tenantry of this district speak of the civil courts with fear and trembling, and I do not wonder at it. The new law has fortunately limited the powers of the courts in cases between landlord and tenant; but in speaking of the causes of the ill-will between the two classes, I give a prominent place to the use made of the civil courts by the landlords.

"22. To give you an instance of the sort of thing that has been going on—Har Sahai, Phatak, zamindár of mauza Kharagpur, Jagatpur, pargana Morádábád, had got orders from the revenue courts for the eviction of two tenants-at-will, Maha Singh and Bhima. The orders were nominally executed on the 23rd June, 1873, but the men were really left in possession. This is a very common practice in this district, the zamindár's object being to prevent the growth of occupancy right, which it is commonly supposed the order to evict will do.

"23. All the tenants of this village, and among them these two men, had applied to me under Act XIV. of 1863 for commutation of rent prior to the passing of the orders abovementioned. On the 11th August, 1873, the commutation was carried out and leases given. Har Sahai was present before me at the time, and he raised no objections, nor did he mention that he had evicted these men.

"24. On the 7th November, 1873, Har Sahai sued Maha Singh and Bhima before the munsif to eject them, alleging that they had forcibly cultivated their former holdings against his will, and claiming damages from Maha Singh Rs. 73 on account of 48-17 kucha bighas of land, and from Bhima Rs. 64-2-0 on account of 42-15

kucha bighas. He claimed damages on the ground that he would have received that amount of profit from the rent in kind of these lands for the year 1281. At the time he sued, the autumn or kharif crop had hardly been gathered, and the rabi was only just coming up.

"25. The munsif, discrediting the testimony of the patwari and other witnesses, who said that Har Sahai had allowed them to continue holding their lands, and without noticing the plea which was raised, that Har Sahai had been a consenting party to the leases given to them in the commutation case, gave decrees in full of the amount claimed against the defendants. These heavy damages were given without so much as an attempt to ascertain whether they were fair or not, and in anticipation of the rabi harvest, in which, for anything that could then be known, Har Sahai's profits might have been nothing. The two unfortunate men were completely ruined. I reported this case to the Judge, and got a reply that nothing could be done for Maha Singh and Bhima. What I had hoped was that something might be done to enlighten the munsif, and prevent him from doing similar mischief elsewhere.

"26. I have now, I think, noticed all the causes of the existing ill feeling of which I am aware. I think matters are improving daily, and that they will settle down after a while. The settlement always causes irritation, and augments any discord that has before existed. In this district the tenantry have been kept down, and only now are beginning to realise that they have any rights or legal status. It is only to be expected therefore that there will be a certain amount of warfare between the two classes for some time to come."

Advantage of batai really dependent on the equity with which it is carried out.

38. The real fact is that, like the patriarchal system of Government, batai and amaldari are good and bad according to the persons who administer them. An energetic, experienced, and perfectly just landlord being found, nothing could be better than amaldari, but an indolent, proud, selfish landlord with an unscrupulous grasping karinda being substituted, it becomes, as Mr. Markham says, "an engine of great tyranny and oppression;" and I am sorry to say that the majority of the zamindars in this district have hitherto come nearer the second than the first type; and hence it is that the system of estimation of crops has proved a curse and a hindrance, the results of which are clearly written in the miserable appearance of most of the tenants in the villages where the custom prevails.

39. As regards the general condition of the tenant class at the time when this settlement opened, it must be called depressed and extremely unsatisfactory after seventy years of our rule. The fact of so many being recorded as holding maurusi right is due merely to the zamindari feeling so sure of their ascendancy that they simply did not care to raise the point and let the tenants record pretty much what they liked.

In England not only has tenant right never existed in the same manner as it seems in this country to have done constantly (except when actual conquest temporarily reduced matters to a condition in which might was right), but the lauded aristocracy of that country have always been remarkable for a general integrity and a public spirit which it is simple truth to say are unknown in this.

The law of primogeniture has operated to prevent our large estates from being divided and broken up as they are here, and we have thus as our chief landowners a body of men of exceptionally high character and education who have set a tone to the state of public feeling, which renders it impossible for any landlord who wishes to retain his position as a gentleman to be guilty of acts which are hardly condemned out here. It is almost impossible to conceive an English landowner acting towards a tenant as the zamindar whose case I above cited acted towards Lachhman, and if he did, the public opinion of all his equals would expel him from their society; but I do not suppose that any one with any experience of this country will be found to state that

such a result would be likely to follow on even worse injustice out here. A high tone of public feeling being wanting, the check to the arbitrary power of the landlords of this country lay in the power of their suzerain to treat them as they treated others, and in cases of well proved oppression and mismanagement to turn them out and give over their estates to worthier men ; and this check was chiefly supported by the judicial fiction of a personified Government or State holding a never-lapsing proprietorship in the soil, before which all other rights were mere matter of favour held during the pleasure of the existing sovereign. This right of the State our Government retained in so far as it applied to the collection of the revenue and the confirming of its own direct interests, but it has to a great extent abandoned it as a means of protecting the cultivators. And for want of this power to enforce immediate and incontestable punishment our well-meant laws have proved ineffectual. Such more especially has been the case with that granting right of occupancy after 12 years, wherever the landlords are powerful and have become fully aware of the advantages of having only tenants without right of occupancy. Take Bulandshahr for example : the value of land having been greatly raised by the canal system, the zamindars found right of occupancy stood in their way when they tried to convey the increased value into their own pockets, and they have accordingly broken down these rights with the greatest ease. The law, moreover, by defining matters, has really rendered the tenant's position in such districts worse than it was, for directly the zamindar has broken down the right of occupancy, he has absolutely no check on his dealings with the tenant, except his own free will. Any resistance or grumbling and the tenant can be turned out, and often is turned out at once, although the unwritten customary law of the country has always been against such ejectments, and in the time of the Emperors complaints of unjust proceedings of this nature might have been enough to cost the zamindar his life as well as his estate.

It is very much to be regretted that Government has not more jealously asserted its right as the only true proprietor of the soil, all other rights being contingent not merely on money payments but on good management, and the right of the tenant to continue on these terms being recognised just as much as that of the manager, or, as we now call him, *the proprietor*.

CHAPTER V.

PRINCIPAL PRODUCTS AND TRADE.

Trade closely connected with agriculture and the general condition of the people.

THESE subjects are too closely connected with the general condition of the inhabitants of the district to allow of their consideration being postponed till later on, though I should otherwise have preferred doing so, as the opening of the Oudh and Rohilkhand Railway has caused a very considerable change in the circumstances under which the trade of the district is carried on since the time of which I am strictly now writing.

2. From all that I can gather from the pargana rent-rate reports and from enquiries made in the district, the agricultural products of the district which are of most importance for trade have for many years now been—

Principal agricultural exports.

- | | |
|---------------|---------------------|
| 1. Sugarcane. | 4. Cotton. |
| 2. Wheat. | 5. Bajra. |
| 3. Rice. | 6. Barley and gram, |

the order in which they are placed showing their relative importance.

Sugar.

3. Thanks to the liberality and perseverance with which our Government supported the cultivation of sugarcane during the earlier years of our administration, the crop has acquired a hold on the country which seems likely never to relax, and with the ever-increasing cultivation the manufacture of sugar has also been advancing, thus affording employment to a large number of persons besides the cultivators.

Three kinds of sugarcane are grown in the district.

Kinds of cane.

* *Agraul, dhaul and chinn*.—Of these the agraul is the most luxuriant, a field of it quite throwing a field of chinn into the shade; but it requires a good deal of irrigation, and the juice, though abundant, is often very inferior for sugar-making purposes, so that altogether the agraul is not a favourite crop, and, compared to chinn, is rarely grown.

Chinn is a hardy thin cane which stands a great deal more than agraul will; it especially suits a tarai or khadar soil, in which it is often grown without any irrigation at all, or at all events with very little. Owing to the thinness of the cane the amount of juice is small, but its quality is good, and as its hardness renders the expense and trouble of cultivation comparatively small, it is more commonly grown than any other kind.

Dhaul is something between the two kinds above described. It is much more stunted than the agraul, but is stouter than the chinn. Its juice is rather small in quantity, but is of the best quality, and is much preferred by the sugar and sweetmeat makers to either of the others. It requires a good soil and some irrigation, however, and altogether is much more difficult to cultivate than chinn, though not so precarious as agraul. Dhaul and agraul are grown to a considerable extent in Bilari and Sambhal, which parganas may be called the home of the sugarcane. There is a good deal of dhaul in Amroha, and the chinn is found everywhere, but perhaps at its best in some of the khadar villages in pargana Hasanpur.

4. The processes of cultivation and of crushing the cane have been so often described that I need not repeat them all through again.

* These seemed to be called aghole, dhaur, and chun in Bareilly. (See Mr. Moens' Settlement Report). Besides these a fourth class, called banda here and paunda in Bareilly, which is grown only in gauhan land and reserved for eating. It is of no importance as an article of trade.

The following points may, however, be worth noting :—

In Bilári and Thákurdwára it is not at all uncommon for the cultivators to prepare the field for cane by digging it up with a "phaura" or strong hoe instead of only ploughing it.

On the high lands the field is watered at least once, and, unless the winter rains have been abundant, usually twice, before the cane is sown. In the khádar this is seldom necessary, as till the hot weather the soil is full of moisture, and water is very likely only two or three feet from the surface.

Considerable care is taken in selecting the joints intended for planting. They are always taken from the upper portion of the plant, and more than two are very seldom taken from one stick. They are usually selected in December, and immediately stored away in a heap under ground till February.

It takes four men to cut, with six women or children to strip and carry up the cane to the kolhu, about a week to clear an acre of cane,* and their day's wages are generally from 1½ to 3 annas in cash to the cutters (according as they do or do not get any portion of the cane) and their midday food, and from half to one anna to the children and women, who almost invariably get one or two sticks of cane and a portion of the leaves.

Cane which occupies the land for two whole years, *i. e.*, for which the land is allowed to lie fallow the previous kharif, is called bhadwár, and that which is grown after a kharif crop is called bastua. As an instance of the extraordinary way in which the language of neighbouring districts varies, I may notice that from Mr. Moens' report it appears that in Bareli the terms purál and kharik are used to denote the same difference, though they would not be understood by an ordinary cultivator here.

5. The area under cane in the whole district in one year is rather over 45,000 acres,† and is increasing steadily though slowly. I have no statistics to show the exact area under each class, but I believe chinn must occupy quite half of the whole.

Area.

6. The produce varies so very much in different places and years that it is quite impossible to give any average which would not be likely to mislead; but in an ordinary crop of chinn cane I should say the produce in juice (*ras*) would be between 400 and 150 maunds *pucka*. Agraúl would give a larger amount, probably between 200 and 250 maunds *pucka*. The measure by which the *ras* is sold is almost always the *karda*, which is called 100 maunds *kucha*, and is really a very little over 50 maunds *pucka*.

Produce.

7. The price paid of course differs very much in different years; as a rule in this district the cultivator does not work with his own money all through. The common custom is that described by Mr. Smeaton in his Bilári rent-rate report, which I will now quote, premising that a 'khandsáli' means a sugar manufacturer :—

Value.

"A cultivator growing cane applies to a khandsáli in June for an advance in cash to enable him to pay part of his rent instalment and expenses of cultivation. He generally gets Rs. 2 for every village bigha cropped with cane. Then in October the khandsáli inspects the field, estimates the probable outturn of juice (*ras*), and after deducting the June advance pays the cultivator a second advance of one-third of the price of the probable outturn of juice.

"In December a third advance is made, just when the mills are being put into working order. Then in February, when the cane has been pressed and the juice has been weighed out, the account is squared. If the tenant has been paid too much, he

* Of course this does not include the crushing of the cane in the kolhu.

† The survey gave an area of rather over 65,000 acres, but this included bāhan or land prepared for cane, but not actually under crop.

refunds the excess payment, or it is debited to him for the next year ; if, on the other hand, the actual outturn exceeds the estimate, the khandsáli pays the difference, or the amount is credited to the cultivator for the following year..

"The transactions are thus cash ones, and this is a great advantage. The tenant has money at hand to pay his rent with and purchase necessities ; and if his holding be large enough and his skill average, he can save part of his other produce for sale in the market. And this is what actually takes place. The cane pays the tenant's rent and sometimes feeds him and his family, the wheat and barley going to profit.

"The demand for cane-juice has been all along on the increase. All who have a little capital embark it in sugar advances. Thrifty cultivators who have saved money—and these are numerous—are to be found in partnership with banyas in the sugar business. Zamindars themselves are finding out how profitable it is ; and many among the wealthiest have been lately taking to buying up the sugar of their villages. A regular competition has set in, and the tenantry have therefore found no difficulty in disposing of their juice to advantage. The influx of wealth formerly alluded to has of course greatly stimulated this competition. Many more persons now have capital than before : great proportion of these can afford to live more frugally, and therefore take a lower rate of profit than the old capitalists."

Not unfrequently in Thákurdwára the tenant and zamindar cultivate the cane and crush it in partnership, and it is generally in the villages where this custom prevails that cane is found paying a batai rent. As a general rule the rent is paid in cash, but in these villages the juice is actually divided after settlement of the joint account for expense of cultivation and crushing.*

The price at which the cultivator can sell the juice of course varies very much according to the conditions on which he grew it. Sometimes the rate per kardā is fixed when he gets the first advance, and then it is almost always a hard bargain against the cultivator. More commonly it is fixed when the second and larger advance is made in November or December, and when the prospects of the crop are pretty well known. Even in this case, however, the price is not determined merely by the probability of a good or bad season, but also by the hold the khandsāl has on the cultivator. Taking, however, a very general average, I should say that in a good year chinn juice would, before the railway was opened, have sold for about Rs. 18 a kardā, and in a year of scarcity at about Rs. 28, whilst a grant would sell for rather less and dhāul at rather more. Since the railway has been opened competition has increased and the prices must be put rather higher.

Taking an average of Rs. 21 as the price before the railway was opened, which is not excessive, and taking the average produce of an acre at about $3\frac{1}{2}$ kardās, the ras would be worth, in round numbers Rs. 75, whilst the cost of cultivation and crushing are about Rs. 50, though of course this varies enormously according as the cultivator employs hired labour or that of his own family.* Since the railway has been opened, owing to the greater facilities for export, and also owing to the general increase in trading competition which has taken place in the last ten years, prices have risen, and an average of Rs. 25 is not excessive, so that the profits have increased by about Rs. 14 an acre.

8. Cane is certainly a paying crop, and this, though its cultivation, including the extraction of the juice, requires the services of a large number of persons, and thus affords employment for a very large number of day labourers, besides the carpenters who are required to repair and set up the kolhus, which in this district are

*For all details regarding cost of cultivation, manufacture of gur, and profits of the cultivator, I cannot do better than refer to Mr. Moens' very full account in his Bareilly settlement report ; to Mr. Butt's special report on the subject as studied in Sháhjahánpur ; and to papers recently published by the Department of Agriculture. There is no use in my going all over the same ground again.

Profit on cultivation.

Large number of persons indirectly supported by cane.

invariably of wood. The following gives a glimpse of one of these labourers, interesting when it is considered how numerous a class he represents, and is taken from some notes supplied by Mr. Duck to the Famine Commission:—

"The labourer, Kallu Chamar, lives in the village. He has a house with two rooms; no cattle, and no land. He lives by day-labour, and supports a wife and a daughter aged about five. His wife occasionally does some work in the fields, but usually stops at home to look after the house and child.

"At present Kallu gets his daily food—one seer of either juár or bajra, made up ready into cakes, with ghi, and a few pieces of sugarcane to flavour it. He lives at the shed where the kolhu stands day and night, and works throughout the day, beginning at about six, by cleaning out the kolhu and feeding the cattle and getting things ready. At about 6-30 or 7 regular work begins, and his share is to keep the mill supplied with pieces of cane and to keep the pieces even under the crusher.

"Like the others he gets a rest whenever a vesselful has been crushed—i.e., once every three or four hours. He eats his food at about noon, and at evening about seven, after all the work is over. He sleeps in the shed, receiving a blanket from his employer, which he only retains as long as he is employed in his service, and has to give up afterwards. He also, however, gets one rupee eight annas for every karda (100 maunds) of cane juice (really about fifty maunds weight in ordinary measure) which is pressed out.

"It takes about a week to press one karda, so that just at present he is in receipt of about eight rupees a month besides his own food; but of course this is an exceptional state of things. He is working hard, and there is some risk of injury, as if his hand got caught under the crusher he would probably lose the use of it.

"His wife and child live (he says) on about two rupees a month. What he makes now will pay his debts (three rupees some annas), and keep him in the hot weather, when he finds little to do. From now till after the rabi has been cut and threshed he expects to have sufficient work to do to support himself without touching what he now earns."

9. The ras having been extracted is made either into gúr or ráb according as it is intended to sell it as gúr (unrefined sugar) or khand (refined). A certain amount is sold and carried away as ras, but as a general rule, wherever there is a considerable amount of sugarcane grown, the manufacture is carried on at the spot where the juice has been extracted. The process is well known and need not be detailed. I think that the cultivators seldom go further than extracting the juice. The khándsáli comes in from this stage, and it is therefore usually his profit or loss if the yield of sugar is large or small in proportion to the juice. Mr. Butt estimated the outturn of gúr at a little under 20 per cent. on the ras, and that of ráb at about 21. Mr. Moens in his Bareilly report puts the latter much higher, and I certainly think that it should be raised to at least 25 per cent. But it varies very considerably and often, I am told, without any perceptible reason. Very likely, as noted by Mr. Moens, the way it is treated in the manufacture is the chief cause in most cases.

Estimated outturn of gúr.

10. The process of turning the ráb into khand is described by Mr. Smeaton as follows:—"The cane is cut in November and December in quantities sufficient to give the mills work day and night. At this time, too, the khandsális or sugar manufacturers select their villages and build on them their little temporary manufactories destined to turn out the ráb or coarse sugar. This coarse sugar is nearly all made by the end of February. The khandsális then transfer it to their headquarters, generally one of the central villages, Bilári, Kundarkhi, or Chandausi itself, where it is prepared. The purifying process is a very rude one. The coarse brown ráb is put into bags, which are then ranged between two bamboo frames. Five or six lithe men hanging on ropes dance on the top of these bags till they yield up all the juice they have. The dry article is then heaped up in a small room, and a layer of the

Manufacture of khand.

siwar grass, which grows under water in small streams, spread on the top. The effect of the application of this grass is to further bleach the sugar, the remaining juice (or shira) trickling out below into prepared vessels. The sugar has by this time assumed a whitish colour. It is then spread out in a thin layer on a huge mat spread upon the ground and subjected to hours of pressure from the naked feet of the sugar-treaders. This process is the final one. The article turned out is khand. It is then sent off in large canvas bags to its destination or sold to the local confectioners, who make their sweetmeats and loaf sugar by further processes of their own.

Outturn of khand.

11. The average percentage of khand to ras is about 7; Mr. Butt puts it at only 5·8, but zamindars whom I have questioned on the subject have put it as high as 8, and Mr. Moens in his Bareilly report gives 7. The manufacture is chiefly carried on at Sambhal, Bilári, Kundarkhi, and Chandausi. Before the railway opened Sambhal was very far ahead of all the other places, and the khandsális of Sambhal carried on dealings all over the district, and even in Bijnor and Budaun; since then their trade has declined, and that of Bilári and Chandausi has increased; and this will probably be more and more the case every year, as the roads about Sambhal are very bad, and the cost of carriage to and from it is consequently great.

Trade in gúr.

12. Gúr is made all over the district commonly; as already remarked, it is made by khandsális, who either take it off to one of the large centres like Kánt, Dhánaúra, or Chandausi, and there sell it to some of the traders, who export it on a large scale, or who themselves take it down to the railway or across to Meerut. When made by the cultivators themselves it is commonly sold to petty traders, who roam from village to village with bullocks or ponies, and purchase a few maunds at a time wherever they can get a good bargain. These men take it to the local markets or "penth" as they are called here, and there it is purchased either by agents of the larger traders, who carry it off to export centres, or by smaller traders, who have got a few carts and carry on a small export trade on their own account. It is commonly sold in these small dealings at so many bhelis a rupee. The bheli is a ball of gúr weighing about $2\frac{1}{2}$ Government seers, being two of the large seers current in this district, each of which is roughly 100 tolas. The price, of course, varies very much with the season. In 1878, which was a very bad year for the agraúl cane, I found in two villages in the south of Hasanpur that three bhelis were selling for a rupee, but as a rule I should think about four would be the rate. Of course in towns the price would be considerably raised by cost of carriage and other expenses. I am now treating of the cost at the spot where the gúr is made. Before the recent increase in export trade competition above alluded to the price was lower, and probably between four and five bhelis for a rupee, though I have no means of deciding accurately.

Principal lines of road trade.

13. As far as I can ascertain, before the railway was opened the principal trade was in gúr carried by carts to Meerut, and in khand and gúr carried in carts to Aligarh. There never seems to have been much river traffic, the course of the Ganges not being sufficiently reliable. The Meerut trade took in a large part of the north of this district, including the two centres of Kánt and Dhánaúra, and also the south of Bijnor, and crossed the river at the Tigri and Garhmukhtesár ghát. The Aligarh trade was almost all through Sambhal, one branch of small importance also passing by the Ahár ghát into the Bulandshahr district. Since the railway has been opened the Sambhal road trade has to a large extent been diverted to the railway, a large part still going through Sambhal, but a portion, which is yearly increasing, going direct to Chandausi or Bilári. Some of the Kánt trade has also been diverted to the railway, and instead of being loaded at Morádábád, this is mostly brought on to Bilári or Chandausi by cart. The people explain this by saying that once it has been put on the carts and the latter have gone the 18 miles from Kánt, it is easier and cheaper to go right down to the consignee's store-house at Bilári or Chandausi than to take the train at Morádábád, and then to have to unload again a few miles further on and again load when it is despatched finally. They cannot probably make their arrangements fit so as to

export it straight away when it is first purchased, and of course it is safer and cheaper to keep it in their own stores than to leave it lying at the station in Morádábád. Part of the Bijnor trade has been diverted to Khetoli, in the Muzaffarnagar district, but the road trade to Meerut has held its own much better than that to Aligarh. This is owing to the excellent roads which connect Morádábád with Meerut, and thence with Dehli, to which a very large portion of this sugar goes. From the trade report published by the Department of Agriculture for the year ending March, 1879, I find that the export trade from the Rohilkhand to the Meerut block was as follows:—

					By rail.	By road.
Refined sugar	...	...	...	...	49,305	13
Unrefined sugar	...	...	...	...	72,768	226,641

and I believe that a very large portion of the road trade took the route I mention, and was in produce grown either in this district or in the south of Bijnor.

14. The total export by rail during the same year from stations within this district was—

					Mds.
Refined sugar	...	...	...	...	114,735
Unrefined sugar	...	...	...	...	191,370

Trade by rail.

and the destinations were chiefly Agra and Delhi. A considerable trade, however, passes through Háthras and thence to Rájputána. And I believe that the railway trade to Agra and Háthras represents to a considerable extent the former road trade from Sambhal to Aligarh.

15. It is quite certain that the improvement of communication due to the railway has given a great stimulus to the sugar trade, but the effect of this on the agricultural classes must be considered further on. Here it is sufficient to note the fact in connection with the means of support which have thus been provided to a large number of non-agriculturists.

Stimulus to export trade given by the railway.

Before quitting the subject I may notice that the import of refined sugar, which undoubtedly goes on to considerable extent, is almost entirely due to speculations, and that the import is generally re-exported. In Chandausi there are several traders who will keep sugar or grain by them for a long time with a view to future profit, and these men, if they hear of a good bargain, will import with a view to exporting again at a profit later on.

16. Next to sugar wheat is by far the most important export. It is the chief crop of the district, about 270,000 acres being annually sown, from which at a moderate computation, even allowing for the small yield on some of the light soil, two hundred and fifty millions of maunds of grain should be obtained on an average, taking good and bad years together.

Wheat.

17. From a note prepared for the Famine Commissioners at the end of 1878 I take the following memorandum by Mr. Smeaton on the subject of the surplus produce of the district:—"It is impossible to make an estimate which will be even approximately true for every year. Slight fluctuations of season entail in the gross serious differences in the harvests. Then, on the other hand, the district, though large, is compact and subject throughout to nearly the same climatic influences. Drought or flood in one part means more or less drought or flood in all. There is no compensatory action; a deficit in one-half of the district is not covered by a surplus in the other.

"I have therefore thought it better to draw up three separate estimates. The first represents the produce of a year in which the seasons have been uniformly favorable. There have been only two such in this district since 1873.

"The second estimate represents the produce of a year in which, although there may not have been a failure in the total normal rainfall, the season has been irregular.

In such a year it frequently happens that after the first burst of rain in the early part of July, little or none falls till the beginning of September, when it comes down in torrents, and holding off during January and February, descends again in March with disastrous suddenness on land which may have been assiduously irrigated in February. Part of the kharif is scorched, part drowned; much of the rabi (wheat and barley) rusted, and some of it blighted.

"The third estimate represents the produce of a year in which the July-October rains have failed. Of course the kharif harvest is a blank. The rabi harvest in such a year rarely fails. Generally speaking, there is a superabundance of rain afterwards, and a harvest is secured more bulky in the straw than in the ear.

"The estimates are based partly on actual cuttings of crops, partly upon statistics of rents taken in kind, and partly on conclusions which experience has enabled me to form regarding the outturn of the land.

"I have not treated the district as one homogeneous whole. The productiveness in different parts is very various. Lands growing sugarcane, oils, dyes, tobacco, opium, cotton, are not included in the food area; the fact being that these lands in time of scarcity as in time of plenty are devoted to their own special crops. It is a mistake to regard them as actual or even as potential food-growing lands. They are reserved by the cultivators for market crops yielding ready cash; and as a matter of fact never directly contribute to the food supply of the district at all. There is no one more stubbornly conservative than the Indian cultivator. Nothing short of a miracle will induce him to relinquish the ancestral rotation of crops until the yearly increasing balance against him at his banker's convinces him that he is farming at a loss.

"I now submit the estimates in detail :—

Crop.	Estimated harvest in a favorable year (in Government maunds).	Estimated harvest in an irregular year (in Government maunds).	Estimated harvest in a year of drought (in Government maunds).
Wheat, barley, gram and other spring grains	70,00,000	60,00,000	45,50,000
Rice	22,00,000	14,00,000	1,50,000
Jouár, bajra	10,00,000	8,00,000	2,00,000
Dál	11,40,000	10,00,000	2,00,000
Total	1,13,40,000	92,00,000	51,00,000

"I have separated dál from the other kharif grains, as it is a distinct item of food.

"Rice, as will be seen, is the most precarious kind of produce.

"CONSUMPTION OF FOOD GRAIN.

"Primarily the grain raised in the district is used in the district (1) as food, (2) as seed. The cultivator at the end of harvest stores away his balance of grain after satisfying in whole or in part the demands made upon him. He knows how much, roughly speaking, he and his family need. The zamindar in the same way gathers in the harvest of his sár and such grain rents as may be due to him, and stores them. These two classes, the cultivator and the zamindar, thus have their own stocks to come and go upon. For several months in the year fluctuations in the prices of food grains need make no change in the amount of grain which they consume.

"The laboring classes of course have no such grain stocks. They are dependent on the supply in the markets; and inasmuch as their earnings are small and

fixed, the amount consumed by them must in great measure depend on the market prices of produce.

"In estimating, therefore, the consumption of food, I have divided the population into two classes: (1) the independent class, including all connected with the land, and who are in a position to store their own grain, including also those who, although not connected with the land, have some capital and do not depend absolutely on their daily labour.

"(2) The dependent class, including those who have to earn their bread from day to day by the labour of their hands.

"Adopting the figures of the 1872 census and adding four per cent to meet the probable increase of population since 1872, I find the total population stands at 1,100,000.

"Dividing this total into the two classes abovenamed I find as follows:—

(1) Independent class	...	...	...	...	700,000
(2) Dependent class	...	...	...	...	400,000

"Now food is generally prepared in a lump for the family. The family in fact, and not the individual, may be looked on as the unit. A householder will tell you with tolerable accuracy how many seers of grain of all sorts his family consumes in the day, and how many maunds are needed for the half-year; but when he is asked how much food he himself or any individual member of his household eats in the day, he only gives a guess, and often a very bad one. I have therefore made the family (an aggregate of five persons of all ages) my unit in the calculation of food consumed.

"On this basis, then, my estimate of consumption is as follows:—

Class.	Grain (bread) consumed yearly (Government maunds).	Dál consumed yearly (Government maunds).	Total consump- tion (Govern- ment maunds).
Independent	47,60,000	11,90,000	59,50,000
Dependent	20,00,000	5,00,000	25,00,000
Total	67,60,000	16,90,000	84,50,000

"Now as to seed. Allowing 6 seers per acre for the kharif and 30 seers for the rabi grains, I find the total ordinary annual drain on account of seed is as follows:—

Harvest.	Seed sown (Government maunds).
Rabi	3,53,000
Kharif	57,000
Total	4,10,000

"Wastage must be recorded as very insignificant, as the estimates of produce refer, of course, to the grain actually weighed out on the threshing-floors. Putting it at 40,000 maunds in ordinary years, the total consumption thus arrived at is as follows:—

	Mds.
Food	84,50,000
Seed	4,10,000
Wastage	40,000
Grand Total of annual consumption	89,00,000

"This estimate of consumption will hold good for both the favourable and the irregular seasons, seeing that in the latter, although the markets are occasionally

tight, labour is on the whole abundant enough, and prices are not by any means prohibitory. In a year of drought, however, there is undoubtedly a diminution of consumption both on account of food and seed. For several months in such a year food prices are so high as to permit only of the barest subsistence allowance (and not always even so much) to the vast body of the dependent class; while the flight from their villages of numbers of tenants and the high price of grain curtail the rabi-sown area. I should estimate the consumption in a year of drought as follows :—

				Mds.
Food	...	...	...	70,00,000
Seed	...	...	...	3,50,000
Wastage	...	...	...	20,000
Total	...	...	...	63,70,000

“The following statements shows in juxtaposition, the estimates of production and consumption for the three different kinds of seasons, without distinction of the varieties of grain :—

Kind of year.	Total food grain produced (Government maunds).	Total consumption (Government maunds).	Surplus (Government maunds).	Deficit (Government maunds).
Favourable year	1,13,40,000	89,00,000	24,40,000	...
Irregular year	92,00,000	89,00,000	3,00,000	...
Year of drought	51,00,000	63,70,000	...	12,70,000

“The surplus therefore in really good years is nearly $2\frac{1}{2}$ millions of maunds. In irregular years there is not a large margin between production and consumption. In the year of failure of the autumn rains, the district is dependent to some extent on foreign food stores.

“I have not considered the case of a year in which both the autumn and winter rains have failed. There has been none such since my connexion with the district, and the reasons of such a collapse are probably beyond the range of an estimate altogether.

“Assuming that the proportion of good and bad seasons is tolerably constant in each successive period of seven years, the annual food production of the district over the whole of such a period may be put, I think, at from $9\frac{1}{2}$ to 10 millions of maunds : and the annual surplus a little over one million of maunds.

“I may here remark by way of caution that no general conclusion respecting the position of the Morádábád agricultural population can safely be drawn from the figures alone. Sugar and cotton are produced all over the district, and sugar is for the most part exported. The agriculturist looks to the sugar crop for his hard-cash, to the cotton for his clothes. So that, then, two items of production must form an essential factor in any estimate of the general condition of the Morádábád cultivating classes.”

18. To this note I would add the following points :—

First, that the dāl mentioned by Mr. Smeaton is principally urd, moth, mung, and gram, which are all grown very extensively; the three first usually with one of the millets, and the last with wheat or barley, or not unfrequently alone. Arhar is not much grown in the district owing to the frosts.

Second, that the export trade in the more valuable grains, such as wheat and better kinds of rice, depends less on the general character of the year than on that of the harvest of these particular crops.

And to push this a little further, that the export of the more valuable grains cannot be measured either in a good or bad year by calculations which proceed merely on weight, as though a maund was of the same value all through. In all years there is a tendency to export the more valuable and consume the less valuable, and if the local supply of the latter is insufficient, there is an import in order to meet the demand. Even, therefore, in a year of drought, such as Mr. Smeaton describes, the export trade would not fail altogether, or probably even so much as would be expected.

19. What the amount of wheat annually exported from the district comes to on an average cannot be very accurately determined; the exports of edible grains by rail aggregated close on a million maunds in 1878-79 and nearly 1½ hundred thousand maunds in 1879-80; but a considerable portion of this was grain imported by rail from elsewhere and re-exported to other markets, and a certain amount more; probably a large amount in 1879-80 was grain brought down from the Taráí or from Bijnór by cart.

As Mr. Smeaton says, it is quite impossible in these matters to give accurate figures; we have not the material to do so. All I can note here is that wheat is universally grown in the district, though it is of course, as elsewhere, very frequently mixed with barley and sometimes with other crops—a fact which has been allowed for in making out the average. And that there can be no question but that there is a very large export trade in it. Even before the railway opened this must have been the case, the trade taking the same lines as the sugar traffic, but the most going to Meerut, and thence to Delhi. Since the railway opened a very large trade has been carried on with Agra, and through it with Rájputána, and this being in great measure additional to the Meerut and Delhi trade, must have increased the exports materially, so that they are now probably very large.

Wheat is grown all over the district, but the best crops are obtained in the khádar of the Ganges in the Kather tract of Sambhal, in Bilári, and in the first class villages of Morádábád and Thákurdwára.

20. Rice is grown extensively in this district, the average area under it being not less than 80,000 acres, including dofasli. But probably the main portion of the exported grain comes from the Taráí and Kumaun *via* Rámnagar and Tánda. The latter place lies within the piece given out of this district to Rámpur after the mutiny, and is a great depôt for the rice coming down from the Taráí.

Rice.

The export trade is mainly by cart to the railway at Morádábád and Chandausi, and by ponies, mules, and bullocks to Meerut and Dehli. Were it not so precarious rice would probably beat wheat in importance for trade, and in a good year the export must be very large. In the past year, 1879, for instance, large consignments were sent by rail to Dehli and also to Agra and Bombay. The railway has greatly stimulated the export trade of this staple, though it might still be considerably opened out if the road communication were better all over the district and in the Taráí. The export now mainly comes, as before stated, from Thákurdwára and the Taráí, but there is some from the south of Hasanpur and the borders of Badaun. The crop is grown all over the district, and were the means of communication better than they are, a larger portion of the produce would be exported from many localities where comparatively small areas are sown than is at present.

21. Cotton is grown all over the district, but being a crop which requires a good deal of labour and attention and which also pays a high rent, the area in any one village is not usually very large. Mr. Smeaton mentions in his inspection note on mauza Kasauli, in pargana Sambhal, that cotton cultivation had been largely extended in this village owing to the demand for the seed, which was found useful in feeding up cows

and buffaloes when mixed with gram and curds, and it is therefore at first sight surprising that the general demand which undoubtedly exists for cotton should not have led to a general extension of cultivation. Probably, however, the regular agriculturist finds cane pay him still better, and Kasauli is an exceptional case, the cultivators being Ahirs and great cattle-owners, which the majority of cultivators are not. The average area under cotton is about the same as that under cane, rather over 40,000 acres, and allowing the produce to be 6* maunds per acre including the seed, the result in cleaned cotton would be from a maund and a half to two maunds. Sixty to eighty thousand maunds of cleaned cotton should therefore be produced in a fair year. This in a favourable year, such as 1878, leaves room for the export trade in raw cotton and cotton goods which undoubtedly goes on in. Cotton, like rice, is, however, a very fluctuating crop, and in one year there may be a considerable surplus for exportation, whilst in the next the local supply is insufficient for district wants and has to be supplemented by imports. In either case, however, there is a trade, and employment is furnished to the Banias and carriers. The local trade also provides means of subsistence for a very considerable number of persons, first in the carriage of the raw article to the centres where it is made into cloth, and then in the manufacture. The cotton is first cleaned by women usually, and this costs about two annas for eight seers of uncleaned cotton, or a little less than one anna a seer for the cleaned cotton resulting. Then the latter is spun into thread by women, who get one chittack per seer and two pie a day as their wages, and then the thread is worked into cloth in the looms. Cloth of this kind is made at Amroha, Naugaon, Sadat, Umri, Kánt, Sambhal, Sirsi, Bilári, Chandausi, Kundarkhi, Morádábád, Parkbara, Thákurdwára, Hasanpur, and several other towns or villages. That made at Thákurdwára, Morádábád, Parkbara, Kundarkhi, and Hasanpur are reported to be the best, the dosuti made at Hasanpur having especially such a good name that the makers have almost always orders on their hands. The trade in cloth is mostly carried on by the wandering traders called 'baiopáris' who roam over the country with ponies or bullocks and pretty closely represent the pedlars of bygone years in England. These men are mostly Banjáras or Patháns, but a few are Banias. Besides the cotton grown in the district considerable quantities come from Rámpur and Budaun to Chandausi and Bahjoi for export towards Bareilly and Lucknow.

Bajra and barley.

22. The area under bajra is very large. It is commonly grown with urd or moth under it and sometimes with cotton, and it is necessary to make an allowance for the mixture of the former grains when examining the jinswar statement attached. I do not put much trust in any of these statements at any time, but they become glaringly wrong if allowance is not made for such facts. For instance, in the settlement khasras rather less than 100 acres of makka were shown for the whole district, and this had been carefully recorded by the muharrirs making up the jinswar statement attached, without a single note or apparently without any idea that it was utterly wrong. I believe makka occupies at least 20,000 acres in an ordinary year, but of course it had been cut before the settlement parties began their partál in November, and the ground had usually been ploughed again either for rabi or for cane; and as they had only to do with the crops on the ground, the only fields they recorded as under makka were the few exceptional ones in which it was not followed by other crops. So in the case of these pulses the area shown in the jinswars as under them is only about 31,000 acres, but I know perfectly well that there is as much as that in pargana Hasanpur alone. Hardly a field of bajra is sown separately from them, and

* Mr. Smeaton put it at only 30 seers a bigha or not quite 5 maunds an acre, but he puts the cleaned cotton as averaging one-third, which is I think high, from one-fourth to one-third being I think nearer. His note is as follows:—

"In this district cotton is generally grown under favorable circumstances in plots between lines of arhar, and in manured soil. But occasionally it is found cast in with the arhar in remote tracts and in lighter soil. It is picked five or six times, the outturn from each plant diminishing at each picking. The average outturn of uncleaned cotton (kapas, i.e., with the seed in it) is 30 seers per bigha, and of cleaned cotton (rui) 10 seers per bigha. Two-thirds of the weight goes out with the seed."

they are frequently mixed with juár and til. Consequently, to get any real idea of the food stores of the district, facts of this kind must be borne in mind.

The food of all except the wealthy classes in this district consists of makka, bajra, juár, coarse rice, or barley, according to which is chiefly grown in their immediate neighbourhood. The dāl used to flavour it is made from mung, moth, urd, and gram. All these crops, except perhaps barley, are liable to very serious fluctuations, and even barley varies a good deal. The set of trade therefore depends very much on the rains, but in a good year I believe there is a considerable export of bajra and some of barley and gram.

There is, however, an import in the same grains, and it is impossible with the statistics I possess to determine how far any one class of grain is actually exported in exchange for other commodities, or merely sent back in repayment of consignments of the same grain before received. The difference in the time of harvest here and down country causes an ebb and flow in these articles of almost universal production and consumption, and barley will thus be bought up in large quantities early in March, to be repaid in April, when the crops have been cut and threshed out here. Although, however, such exports need not show a balance in favour of this district, they and the imports also afford profit to the trading classes and occupation to many non-agricultural labourers, and are therefore of importance as effecting the general prosperity of the people.

All the local trade, too, gives employment to carriers and small shopkeepers, and the numbers who must altogether be employed in the whole district helps us to understand the very large percentage of so-called non-agriculturists.

Area statement of the Morádábád district for all the principal crops.

Serial number.	Name of crop.	In the year of survey.	1284 fasli.	1285 fasli.	1286 fasli.	Total of all the four years.	Average of the four years.	Remarks.
1.	Juár	51,910	70,113	*17,928	56,136	196,088	49,022	* Year of drought, when most of the kharif was a failure.
2.	Bajra	145,553	136,199	47,485	108,302	437,540	109,385	† The returns for the survey year were erroneous, as explained in para. 22, and I believe that the areas shown are generally below the mark, owing to do-fasli land escaping observation.
3.	Makka	†	12,696	6,424	23,661	42,781	14,260	
4.	Cotton with arhar	50,001	42,027	27,791	55,124	174,943	43,735	‡ In the year of survey many báhan fields, that is, fields prepared for next year's crop, were erroneously recorded as under cane.
5.	Sugar	†63,053	44,675	44,139	42,009	193,876	48,469	
6.	Rice	89,109	80,383	30,505	62,245	262,194	65,548	The average is pulled down by the year of drought, and, like makka, by the omission to record do-fasli fields in many instances.
7.	Wheat	286,367	228,514	205,503	259,684	980,069	245,017	The low figure for 1285 fasli has pulled down the average rather. I think 270,000 acres is not too high for a fair average year.
8.	Barley	72,041	70,737	53,478	52,615	248,872	62,218	These crops are rarely grown alone, as stated in para. 22. I believe the area on which they are sown is not really less than 150,000 acres.
9.	Mung, moth	36,608	33,586	18,740	34,325	123,259	30,814	
10.	Gram	91,262	104,122	95,120	99,241	389,746	97,436	
	Total	885,904	823,002	547,113	793,342	3,049,368	765,904	

Juár is most extensively grown in Sambhal and least in Thákurdwára.

Bajra ditto ditto in Sambhal and Bilári and least in Thákurdwára.

Makka ditto ditto in Hasampur and Morádábád and least in Sambhal.

Rice ditto ditto in Thákurdwára and Morádábád and least in Bilári and Sambhal.

Mung and moth ditto in Hasampur and Amroha and least in Bilári and Morádábád.

Cotton and sugar, wheat and barley, are universally grown, though the outturn of course varies with the soil.

23. Besides these articles there has for some time been a considerable local trade in ghí, and since the railway has opened there has been some export of this, principally from Bahjoi, which is the trading centre nearest to the bhúr tract of Sambhal and south Hasanpur, whence the ghí chiefly comes. The following extract from Mr. Smeaton's rent-rate report of Sambhal shows the manner in which this trade locally known as badni is carried on:—

"Agricultural produce is necessarily limited in amount and greatly dependent both for quantity and quality on the seasons. But the Ahír's great stand-by is the ghí he makes from the milk of his buffalo-cows. He sells his ghí, and with the money he receives, pays some of his rent and buys more live stock. In fact the ghí trade in this part of the country is a vital element in the rural economy. When an Ahír's buffalo has calved, he goes off to the Bania and offers to supply him with ghí; the terms being that the Ahír gets an advance in cash to the extent of, say, one maund or Rs. 20 to 25, he undertaking to supply a certain quantity of ghí. The bargain is almost always a written one. Once in every seven days the tenant trudges to the market town or village, and hands over to the Bania the ghí he has made during the week. The Bania weighs it and credits it to his account. And so the transaction progresses for as long as the buffalo gives milk, generally a twelvemonth. At the end of this period the accounts are squared, and the balance on whichever side due is paid up. The tenant's security is his buffalo; and the bond distinctly specifies that if he defaults, the buffalo is liable to be sold up. A good buffalo gives six to eight seers of milk a day; and the yield of ghí is about half a chittack to every seer of milk. The milk is first heated, and then after its transformation to buttermilk it is churned. The butter which comes out is heated and the ghí obtained. The buttermilk remaining over after the churning is available for feeding both the children and the buffalo. There is nothing the buffalo-cow thrives better on than this buttermilk mixed up with ground juár.

"The ghí advances in the bhúr tract, therefore, are the same sort of subsidy to the Ahír tenantry as the sugar advances are to the Bilári agriculturists and their neighbours in the Sambhal Kather."

The extension of cultivation which has taken place since last settlement must have materially reduced the grazing-grounds, and it is only too much to be feared that their area will at no very distant date get so small that the keep of cattle will become too expensive for the Ahírs, and the ghí trade will diminish. Of course it is only whilst the buffalo is actually giving milk that she is fed up in the way above described. There must be large grazing areas to keep the animals on at other times.

24. There is also some export trade in hides principally from Sambhal and Hassanpur. Of late years, too, a large demand has sprung up for the Morádábád brassware. The export trade has, however, sprung into importance almost altogether recently, and is confined to Morádábád city so it only requires passing notice.

25. The main exports are certainly sugar and wheat; rice is often largely exported, but in many years fails, and is not therefore of the same importance. The chief imports which pay for these are salt, tobacco, metals, and piece-goods. The first used to come chiefly from Delhi, but owing to the large export trade which the railway now enables the district to carry on in grain and sugar with Rájputána, a considerable trade has now sprung up in salt imported from Rájputána through Agra and Háthras. This mainly comes to Chandausi, which is yearly growing in importance. The Panjáb trade used to come by road through Meerut, crossing at the Garhmuktesar ghát, and to a certain extent this trade still goes on, but most of the salt is now sent by rail as far as Chandausi or Morádábád, whence it is distributed by carriers, either Játs with their large wagons or the ubiquitous baiopáris with bullocks or ponies. The annual consumption of salt in the district depends on the condition of the people generally. In a good year, with abundance of food and a large export trade, it would of course be larger than in a bad year, but the fluctuations are not probably so great as might at first be supposed.

26. The average requirements of the district would be about 1,00,000 maunds for eating, besides a certain amount used for other purposes. The railway statistics show a gross import of over 3,00,000 maunds and a net import after deducting re-exports of very nearly 2,00,000 maunds for each of the two years 1878-79 and 1879-80. The re-exports by rail are chiefly consignments to Bareilly and Oudh, and the surplus of the net import is the salt which is sent on by road into the Taráí and the east of Bijnor or to Rámpur or to Budaun, merely passing through the district. Besides the rail trade there is some import by road from Delhi and Meerut, but not to a very large extent.

27. The trade in piece-goods is mostly from Háthras or Delhi generally; they are carried by rail, but sometimes they are carried from Delhi by road. A considerable portion of the goods which are important to Chandausi are thence re-exported to Bareilly or Rámpur; but allowing for this, the importance to the district itself in a good year, when there is a large trade balance in its favour against Delhi and Rájputána, must be considerable, taking into account the high value these goods bear in proportion to weight.

28. The import of tobacco is mostly from Oudh by rail and Budaun by cart. I have no statistics whatever to gauge its extent by, but it is certain there must be a considerable import, as, owing to the frequent frost in December and January, it is very little grown in the district, whilst the consumption is apparently just as unusual as in districts where it is extensively cultivated.

29. Metals are chiefly iron and brass, the former coming from Nipál through Oudh, and the latter from Calcutta. The recent development of the Morádábád ware trade has increased the import of brass, which comes in thick broad sheets, and are shaped here into the form required. Last year the value of the brass imported into Morádábád city for the manufacture of ware was rather over a lac of rupees.

30. Since the license-tax has been imposed traders look on all enquiries as to their business with so much suspicion, and the information they give is often so utterly misleading, that it is extremely hard to give any accurate account of trade dealings.

Still in all not exceptional years the main course of trade, besides the flow already alluded to, is that above given; a large export of sugar and wheat, with a fluctuating but sometimes large export of rice, to Meerut, Delhi, Háthras, and Agra, and in return a large import of salt, a considerable import of piece-goods, and a steady but less valuable import of tobacco and metals, but a fluctuating import of cotton. Besides the main imports there is a pretty brisk trade in lac, red pepper, spices, and potatoes from the hills, carried chiefly by the baiopáris already alluded to, who in return take back salt, country cloth, and tobacco. Their dealings are, however, only on a small scale.

31. I now give the statistics kindly furnished by Mr. Payne: It is, however, necessary to note that the effects of a year of scarcity or plenty are not all shown in the trade of the year itself; they probably affect next year's figures too; grain is also often kept in store at centres like Chandausi for a long time. Thus a short time ago, when I was there (at the end of October), I saw a large quantity of wheat going to the station for export to Rájputána. At first sight this grain would very likely be mistaken for rice by any one looking over the export returns, where both are merely shown as edible grains; and just in the same way I believe there is often a large export of rice in March and April if the rabi harvest is a good one, and this is very likely to be confused with the rabi grains.

Statement of export and import trade from and to Moradabad,

FROM OCTOBER, 1878,

Commodities.	October, 1878.		November, 1878.		December, 1878.		January, 1879.		February, 1879.		March, 1879.	
	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Edible grains (including rice).	91,370	9,432	1,74,912	10,886	1,35,935	84,106	70,713	1,38,234	85,415	4,09,194	80,688	1,17,227
Raw sugar or jāgrī	1,622	90	6,752	...	39,350	206	34,042	...	26,472	...	16,067	1,039
Refined sugar	4,614	2,004	4,013	1,039	3,669	973	7,768	720	10,079	892	16,191	2,671
Cotton	563	287	4,947	287	6,041	367	5,412	236	3,901	40	1,441	379
Piece-goods	2,228	1,715	2,594	2,453	973	2,061	902	1,785	1,081	540	1,301	2,119
Salt	512	9,985	669	31,520	481	47,190	749	40,659	612	2,024	1,071	23,189

FROM OCTOBER, 1879,

Commodities.	October, 1879.		November, 1879.		December, 1879.		January, 1880.		February, 1880.		March, 1880.	
	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Edible grains (including rice).	1,07,809	19,057	1,60,517	21,060	1,68,131	5,409	1,63,046	11,299	1,01,788	6,031	1,44,135	2,767
Raw sugar or jāgrī	440	...	9,009	...	7,311	18	7,797	252	6,464	523	9,180	212
Refined sugar	5,047	376	3,369	3,307	2,404	1,240	2,052	361	1,339	396	7,031	2,186
Cotton	41	209	561	4,064	2,128	16,477	1,693	7,170	938	3,117	220	1,560
Piece goods	2,664	861	1,806	3,360	813	3,691	926	1,632	787	1,598	1,199	1,650
Salt	986	14,050	4,457	42,335	876	37,878	1,724	4,591	215	48,506	954	28,210

Bildri, Kundarkhi, Chandausi, and Baijoi Stations.

TO SEPTEMBER, 1879.

April, 1879.		May, 1879.		June, 1879.		July, 1879.		August, 1879.		September, 1879.		Total.	
Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.
Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
83,269	4,313	1,26,871	5,267	46,493	6,616	17,821	1,747	42,590	1,923	39,810	3,349	9,95,582	7,95,794
29,401	313	21,721	704	9,173	...	1,925	...	1,642	...	3,203	...	1,91,370	2,352
17,480	2,712	23,254	5,627	16,232	3,292	2,877	612	2,793	854	5,765	1,454	1,14,735	22,850
2,245	445	6,407	570	1,074	279	202	74	596	355	150	296	32,979	2,515
161	1,488	1,245	2,400	1,140	1,157	1,357	530	1,639	954	3,058	703	18,579	18,205
1,607	21,699	739	81,915	968	33,197	1,091	20,984	1,502	12,868	1,911	1,966	11,068	3,02,010

TO SEPTEMBER, 1880.

April, 1880.		May, 1880.		June, 1880.		July, 1880.		August, 1880.		September, 1880.		Total.	
Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.	Export.	Import.
Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
1,48,339	1,019	2,72,595	6,655	1,58,361	7,087	96,375	9,779	1,18,026	9,928	51,744	9,773	16,90,866	1,08,864
10,625	180	7,709	20	4,199	...	1,488	...	1,642	24	326	...	66,190	1,229
14,180	1,239	16,766	682	10,759	2,415	3,546	4,255	2,195	1,271	1,688	626	70,376	16,554
96	322	148	1,075	255	2,294	801	2,569	440	1,069	213	681	7,534	40,607
22	4,258	766	5,308	911	2,533	1,409	1,544	1,431	1,206	1,592	759	15,954	38,486
22	12,350	1,054	27,200	840	21,384	1,195	24,939	615	24,579	294	4,184	13,232	3,31,531

CHAPTER VI.

ON COMMUNICATIONS AND PRICES.

1. In the previous chapter I have had more than once to refer to some of the roads along which the trade passes, and it is therefore as well now to describe briefly the most important.

2. As this is a settlement and not a road report, I see no reason to give voluminous lists of roads and distances, and the accompanying map, which is on the scale of six miles to an inch, will be sure to show the latter if required.

The Meerut road.

3. The only roads I think I need touch on are six in number, of which the most important is that from Morádábád to Meerut, which is metalled for the whole of its course in this district, except the last mile and a half beyond Tigri, where it descends into the bed of the Ganges and metalling becomes impossible. Tigri is opposite Garhmuktesar, and the road from the latter place to Meerut is all metalled, so that, except at the break made by the Ganges, the road is metalled and high, and in first rate order the whole way to Meerut. This has been one of the greatest boons we have given to the district. Up to the present rains, when a very exceptional flood carried away a bridge over the Gárgan, it has always been open for the heaviest traffic between Morádábád and the west of the district throughout the year, and being connected with Amroha and Dhanaura by two metalled branches, about five and nine miles long, it has been most useful both for trade and for the convenience of travellers to and from those places. The way in which a road of this class is appreciated can only be understood by those who know the district, and the extreme difficulty there is in getting about it in the rainy season in any kind of wheeled conveyance. Considering the large trade in heavy bulky articles like grain and gúr, it is a pity that more money cannot be spared for the improvement of the district roads. There is I think too much of a tendency to consider any road good enough for a native gári, and to confine expenditure too much to roads which are required for military purposes or for the passage of dák gáris and other vehicles used by European travellers. The district officers are not to blame for this; with the small sums at their disposal they simply cannot do more than they do. The fault lies in the system which spends so much of the district revenues outside and leaves so little to spend in it.

The Sambhal-Aligarh road.

4. The roads in pargana Sambhal for instance are for the most part mere tracks, even the main road from Morádábád, which is perhaps next in importance to the Meerut road, being, as Mr. Smeaton says in his rent-rate report "a hopeless succession of ups and downs, extorting complaints from even the stoutest cadgers." Traffic on this road has, it is true, decreased considerably since the railway was opened, but there is still quite enough to make an improvement of this road greatly appreciated by the people of the district, and more especially by the inhabitants of Sambhal, where trade is decaying year by year partly, at all events, owing to the difficulties of communication.

5. The road to Bijnor is only metalled for the first three miles out of Morádábád, but owing to its running at a higher level than the Sambhal road it keeps in much better order. Like all the other trade roads it gets cut up to some extent in the rainy season, but cart traffic is rarely altogether stopped. It is not, however, used to nearly the same extent as either of the two roads already mentioned, or as the fourth I have to mention.

6. This is the Káládúngi road, which was up to last year (1879) kept up as a metalled road for the whole distance (48 miles), but is now only so kept up as far as the Kosi, or about half-way. There is a good deal of traffic along this road, on which

Tānda, before described as the rice emporium of this part of the country, is situated, but the violent floods caused by the overflowing of the Kosi and of the Rāmganga in the rains constantly cut it up, and the difficulty of crossing the latter river, which runs immediately below Morádábád, renders it of little use in the rains compared to the Meerut road.

7. The road to Bareli, which is also that to Rāmpur from Morádábád, is metalled for the whole of its course, but is kept up rather as a military route than on account of the trade which passes along it. The road is, however, of considerable use to the Rāmpur authorities and to travellers between that place and Morádábád.

8. The last road which requires special mention is that *viâ* Kundarkhi and Bilári to Chandausi, and thence to Budaun. This is not metalled, and in the rains traffic is impeded by the floods from the Gāngan, but at other times of year it is usually in good order, and is a very much better road, taken all round; than the Sambhal one. There is, as already mentioned, heavy traffic along it, but on the whole it would probably be hardly worth while metalling it.

9. Sambhal and the south of Hasanpur are perhaps the portions of the district which most require attention, and I cannot see why it should not be possible to pay the greater portion of the expense of improving the Morádábád and Aligarh road by a toll on the traffic using it. The branch road between Sambhal and Chandausi might also be improved on the same system.

10. Pargana Thákurdwára is also badly off. Mr. Crosthwaite says in his rent-rate report: "streams are unbridged, and the roads are generally not only unmetalled, but bad even for Rohilkhand." The pargana is, however, a poor one, and natural difficulties are great. I am therefore doubtful if much improvement is at present possible.

11. The railway was opened between Aligarh and Moradabad in October, 1872, and between Chandausi junction and Bareli in December, 1873. Coupled with the general extension of the railway systems of India which has taken place during the past twenty years and the great stimulus which export trade has received by the belief in its advantages which has grown so rapidly amongst the trading classes, the opening of this line of railway has most materially increased the trade of the district.

There are five stations in the district: Baijoi, Chandausi, Bilári, Kundarkhi, and Morádábád, but of these Chandausi is by far the most important, as it is thence that the greater part of the railway export trade starts. There is a considerable import into Morádábád, but the export is comparatively small.

12. The effect of the increase in trade has naturally been a very marked rise in prices. The statement opposite shows this for the principal staples, as far as I can make it out. The figures are mostly taken from the parganawar rent-rate reports, and are therefore as accurate as any I could obtain, but I must confess I feel grave doubts whether some of the rates given for the first decade are not erroneous. The rise in price seems enormous if they are correct, and the perpetual confusion which occurs in all these early returns between the different seers and the kucha and pukka maunds renders it impossible to rely much on them. Still, taking the whole district, the average must be approximately correct, and this shows an increase of about 70 per cent. in the edible grains, 60 per cent. in gúr, and 50 per cent. in cotton. This rise in prices might reasonably be expected to have affected the condition of the people very materially, but it is better to defer the consideration of this point. The point to notice now is I think the extent to which trade must have developed, and the large amount by which money must have increased in the district to keep pace with such a change.

Statement showing prices current for some of the principle staples in the district of Moráddábád for two periods before and after the mutiny.

[N. B.—The figures given show the number of Government seers selling per rupee.]

Name of pargana.	WHEAT.				COMMON RICE.				BARLEY.				CLEANED COTTON.				JUAR.				GUR.				MUNG.				BAJRA.			
	First period.		Second period.		First period.		Second period.		First period.		Second period.		First period.		Second period.		First period.		Second period.		First period.		Second period.		First period.		Second period.		First period.		Second period.	
	Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.		Rate.	Rate.	Percentage of increase or decrease in prices on 1st decade.	
			I.	D.			I.	D.			M. s.	I.			D.	I.			D.	Seers.			I.	D.			Seers.	I.			D.	M. s.	I.	D.	M. s.	I.	D.
Morádábád ...	37	22	68	...	52	33	57	...	1 18	34	72	...	3	2	50	...	48	26	65	...	16	10	60	...	1 10	24	150	...	1 18	27	115	...
Sambhal ...	34	21	63	...	...	...	...	...	1 20	33	82	...	...	...	...	...	65	24	88	...	...	...	...	...	46	24	91	...	49	25	96	...
Bilári ...	34	21	62	...	...	...	...	...	1 20	31	94	...	...	...	...	...	70	29	108	...	...	...	...	...	46	26	77	...	49	29	70	...
Thákurdwára ...	37	21	76	...	...	...	...	...	1 17	32	78	...	3½	2½	40	...	55	26	116	...	19	12	67	...	38	24	54	...	1 6	24	92	...
Amroha ...	40	22	82	...	47	32	28	...	1 12	27	93	...	...	...	...	...	50	26	92	...	16	10	60	...	...	...	...	...	37	24	58	...
Hasanpur ...	...	22	...	...	...	...	...	...	1 5	26	73	...	...	...	...	...	...	...	...	...	12	9	33	...	37	21	76	...	40	29	40	...
Average for the whole district.	36	22	64	...	49	32	53	...	55	32	78	...	3	2	50	...	57	29	95	...	16	10	60	...	43	24	79	...	45	26	77	...

Note.—The first period selected is that between 1845 and the mutiny, and the second between 1860 and 1878, but the periods are not exactly the same for all parganas: and thus in Hasanpur and Amroha the prices of the second period are rather higher than in the other parganas owing to their taking in two years later.

CHAPTER VII.

ON THE VARIOUS OCCUPATIONS OF THE NON-AGRICULTURAL CLASSES.

1. Dividing the non-agricultural population under the following four heads, I can only deal with each very briefly.

The first head is *Government servants*, which includes most of the European residents, and may be subdivided into soldiers; officials connected with the different courts; police and chaukidars; patwáris, post-office, railway, and educational establishments; and miscellaneous. This last head is meant to comprise such establishments at Government dispensaries, municipal supervisors, and others.

Altogether they probably number rather over 10,000 men, or, including their families, about 40,000 persons,* about 9 per cent. of the total non-agricultural population. It must, however, be noted that patwáris sometimes, and chaukidars almost invariably, hold land, and if these two subdivisions are struck out, the numbers will be reduced by about half.

Next come the *traders and shopkeepers*, including all persons who make their living by the sale of commodities other than labour or personal skill. The number of traders who carry on the trades already described in Chapter V. must be very large if we include the baiopáris. Mere carriers may be excluded, as they come better in the labouring class, but most of the baiopáris are actual vendors and must be taken into account. At a very rough calculation I should put the numbers of *traders*, including their families, at about 30,000, but this is without the *shopkeepers* and many of the money-lenders, who are hardly to be described as traders. Altogether I should not put the class at less than 80,000 persons, and it may number more. Of course it is not to be confused with the Bania caste shown in the statement at page 23. It includes several Muhammadans and all the Halwáis, vendors of cloth, and similar petty shopkeepers, though not artisans or manufacturers, who work (as many of the weavers do) on daily wages or by job work, and have nothing to do with the sale of the article after it is produced. Assuming the number to be rightly shown as 80,000, this class accounts for 18 per cent. more of the non-agriculturalists.

The third class includes all skilled artisans, what in England would be called the liberal professions, and servants on regular monthly pay, and these must number altogether, including their families, at least 1,50,000, probably more. Roughly they may be assumed to be 36 per cent. of the whole.

Sixty-three per cent. having thus been accounted for leaves only 37 for the fourth class, the labourers, beggars and strollers, and this agrees fairly well with the figures in the last census report.

2. In the second class, besides the regular traders and the baiopáris, whom I have already noticed, the money-lenders require some special mention. The great mass of the cultivators require regular periodical loans for their business, and these are made to them either as advances by the khandsális or on interest by their own zamindars, or by professional money-lenders. Where the trade consists merely in temporary advances repaid fast by fast, I do not think it does much harm. On the contrary, the creditors in their desire to keep good customers are often very moderate in their demands, and the loans are really a boon to the cultivators. The common rate of interest in such cases is 2 annas per rupee for about six months, or roughly 2½

* This estimate may seem low, but it must be remembered that some of them have not got their families with them in this district.

der cent., which, though high, is not exorbitantly so when the risks are considered. With approved customers and fair security the rate is not unfrequently reduced to half, and it is but rarely that formal bonds are entered into for repayment.

When, however, the loans are not cleared off, and the cultivator gets at all deep into the money-lender's books, the matter changes. It is then customary for the creditor to take over the *whole* of the cultivator's grain or cane-juice and dispose of it to the best advantage for himself, giving the debtor credit for a price always somewhat, and sometimes very much, below the current rate. The creditor then advances the debtor sufficient means just to subsist and work his land, and this goes on till he either decamps or dies. Under such circumstances the cultivator is little better than a slave. I am glad to say, however, that I do not think that such cases are very common. They are found most often in villages where the zamindar himself is also the money-lender.

Besides these regular yearly loans there are a vast number of transactions carried on unconnectedly and as the emergency arises. These are principally sought by cultivators who have not got a regular account with any banker, or by the non-agriculturists, and the profits from these are sufficiently large to form the principal means of a considerable number of persons. Loans for marriage or funeral expenses and for purchase of cattle, food, and clothes are perhaps the commonest, and costs of litigation are also a not unfrequent item.

The rate of interest charged on these transactions of course varies enormously. In many cases the creditor has no security whatever further than the good faith of the borrower, and the latter has no chance of raising the loan from anyone else. It is not therefore strange to find even as high a rate as 1 anna per rupee per *ensem* charged, and where grain is lent, the rate is sometimes even higher, 50 per cent. being charged for about six months' loans.

From enquiries made during the last three years I have been much struck by the large number of bad debts which many of these small money-lenders incur, and I cannot wonder at the high rate of interest they charge. They make their profit by the way they fleece their more substantial or more honest customers, and it is amongst this class that the loans work so much mischief. Thus I have more than once seen small properties of eight or ten acres hopelessly involved for debts which at starting were not probably one-fifth of their fair price, and on which the debtors have for years past been paying something in cash or kind, though not sufficient, according to the creditor's accounts, to keep pace with the compound interest. It is cases like these which the scheme of Government loans will really help if properly worked, and it would be of great advantage if summary power could be given to the officer in charge to compound the money-lender's claims at a sum equitably fair, in order to clear them off at a cost which the property could bear.

The number of shopkeepers is probably not very large, as except Morádábád, Amroha, and Sambhal, and perhaps Bilári, there are no towns with many shops. Chandausi is of great importance as a trade mart, but the town is not very large and the shops are but few in number.

3. Amongst the artisans are included the carpenters and blacksmiths, who are found in nearly every village, and the Julahás, who really earn a living by weaving, and who are numerous in this district.

In agricultural villages the carpenters and blacksmiths are still usually looked on as village servants, receiving a certain *hak* or fee, paid in grain at each harvest, or a certain sum on each plough and cane mill used during the year. Julahás, on the other hand, with shopkeepers, such as Halwáis, Telis, Chhípís, Ghosis, and others, have till quite recently usually had to pay house rent or fees to the zamindars. They are usually found in rather large and populous villages, and in some, as for instance Bilári, the income derived from them was very large.

Since settlement began* Government have issued orders which virtually prohibit the levy of fees on any of the trades by the zamindar, and these have been taken advantage of by several of the bolder spirits, and more especially by the Banias, as good ground for refusing to pay even ground rent. These orders were probably intended to prevent trade from being unduly hampered; but in some cases they must, if strictly carried out, have caused rather severe loss to the zamindars.

As examples of the kind of receipts I take an ordinary average instance in each of the three parganas, Morádábád, Bilári, and Sambhal, for which statistics were collected before the orders above cited had been issued. I expressly avoid taking exceptional cases, such as Bilári, where the amount must be counted in hundreds if not thousands of rupees.

Pargana.	Village.	Rate of house rent and fees.	Estimated amount in a year from these sources.
Morádábád	Pipli Naik	Re. 1½ a year on all goldsmiths, cloth dyers or printers, grain-parchers and cotton-cleaners. Re. 1 on all oil-men and money-lenders. Re. 1 on each loom employed in weaving country cloth.	From Rs. 60 to 70.
Bilári	Mau Kather	Tax on a weaving establishment employing about six looms and having a monopoly in the village, Rs. 18 a year. Tax on Baunyas' four shops at varying rates, Rs. 17. Tax on Chamárs, being really ground rent on houses occupied by landless laborers, averaging about Rs. 40. Lease of weighing fees in bazar, Rs. 20; in the rest of the village, Rs. 50. Total Rs. 70. Fees on each karda of cane-juice and on each maund of gúr made in the village average Rs. 35.	About Rs. 150.
Ditto	Seondára	House rent on all non-agriculturists other than village servants about Rs. 85. Tax on cane-juice, Rs. 2 a karda, about Rs. 100. Lease of weighing fees about Rs. 100.	From Rs. 250 to 300.
Thákardwára,	Sarkara, kalán,	Oilmen, Re. 1 each; grain-parchers, annas 12; Gararias, 2 blankets each; Chamárs, 1 hide and 1 pair of shoes.	Cash about Rs. 12 plus 8 blankets, about 40 hides and 10 pair of shoes.

Of course income of this kind is not usually obtained in any merely agricultural village and is therefore confined to about 10 per cent., or perhaps even 8 per cent., of the total number; but in very many of the villages where they were taken the annual value seems to have been over a hundred rupees, and to the general run of zamindars this is a large sum.

4. The productions of the Amroha pottery gives employment to several hundreds of persons in that town. The clay is taken from several places near the town, and is strong enough to permit of the articles made of it being very thin and consequently light. Unfortunately the chief income has been from the sale of toys and figures at the markets and fairs held in the neighbourhood, and the workers have got accustomed to make cheap gaudy things, without the slightest regard to symmetry or evenness of colouring. The Morádábád ware, which is also peculiar to the district, is a much higher class of article and is rather expensive. As before stated, the demand for it has enormously increased within the last ten years, and this seems to correspond with the date from which it has been commonly manufactured with a dark ground of lac instead of only in brass and tin. Formerly the process consisted simply in making up the brass, which is received from Calcutta in large sheets, into the shape required, coating it with tin, much in the way that saucepans are plated in this country, and then cutting out the pattern so as to show it in the brass appearing through the tin

* G. O. No. 510A., dated 3rd April, 1876, and G. O. No. 986A., dated 9th April, 1874.

plating, or leaving it in tin on the brass ground. Lately the other system which had before fallen into neglect has been revived, and a thin layer of black lac is put on, which being scraped off throws out the pattern in lines or figures of tin and brass. At the present time some thousands of persons earn a living by this work, which therefore requires some passing notice.

At Amroha, besides the pottery, camp beds of very good quality are made. The frame and legs are of handsomely painted wood folding up into a small compass, and across the frame strongly secured to it is a kind of mat of richly coloured wool, very strong and durable.

In pargana Hasanpur, especially in the extreme south-west, a small quantity of the rough glass known as *kānch* is made by a class of persons called *Manihārs*, who number altogether about five hundred.

5. Of the professionals, the most numerous are probably the pleaders, but there are a considerable number of *hakims*, especially at Amroha, which used at one time to be much resorted to by the wealthier Muhammadans as a sanitarium. The *hakims* naturally thrive under this state of things, and as there were some able men amongst them, they acquired fame, and their services were much sought for till recently, when the spread of European medicines has gone far to supplant them.

6. The number of servants is so large as to require special notice. In the census report males over 15 years of age are shown as numbering no less than 42,654. I believe this is wrong, in that it probably includes several persons, like *chaukidārs* or *peons*, who should be shown as Government servants; but even allowing for this, and also for the fact that a considerable number of servants are probably unmarried or have families resident in other districts, the total for the sub-division cannot be much less than 60,000, which is nearly 6 per cent. of the whole population, or 14 per cent. of the agriculturists. The reason for this consists first of all in the position of the zamindars of the district, a very large number of whom would consider it below their dignity to do without a servant, even though they can ill afford to pay him, and of whom a very large number are really wealthy. Next, it was the natural result of the prevalence of *batai* and the non-residence of the landlords, who, as described by Mr. Crosthwaite in his letter quoted in Chapter IV, had to keep a large number of hangers-on to watch the crops and take their share for them.

7. Of the fourth class, all but the labourers may be left out of consideration. These with their families numbered nearly 150,000 at the last census, but it must be remembered that the work on the railway had just then brought a good many to the district who shortly afterwards left it. Of the remainder by far the greater number are *Chamārs*. These are chiefly agricultural labourers, that is, they earn the main portion of their subsistence by field labour. The average pay for these men is an *anna* a day, and their food, that is, about half a seer of some coarse grain made into *chapatis*, about noon and the same in the evening. When paid in cash only, 2 *annas* a day is about the average. When reaping *rabi* crops or rice they are commonly paid in kind and two to four seers of grain, according as the harvest is plentiful or the reverse, or more accurately a sheaf of the crop sufficiently large to yield this quantity of grain, besides straw, is a fair day's wage. At harvest time in a good year they are not at all badly off, and sometimes make enough to buy a spare blanket or some cheap silver ornament; but in a year of scarcity, such as 1285 *falsi*, they are often in dire straits. The miserable way in which the weaker members of this class live may be gathered from the following extract taken from the same authority as that before cited in Chapter V. The example is taken from *Behri*, a well-to-do village in the south of pargana Hasanpur:—

a “*II.—Mehtab, son of Ram Dinuah, Hajjām, labourer.*—Lives with his mother, an old woman of about 50. Has no wife nor family. On the same day as above described rose about 7 A. M., went to the house of a Bania and began work, cleaning

cotton, about 7-30. This work is done on contract; two seers of cleaned cotton being paid for at the rate of one anna (the cotton of course belonging to the bania)* His mother went with him and worked too. At noon they got one cake of moth and some curds between them, about one quarter of a seer each. Set to work again as soon as they had disposed of this—i. e., after about a quarter of an hour, and worked till sunset (about 5-20). Between them they cleaned two and a half seers of cotton—i. e., they extracted two and a half seers of wool separate from the seed, which weighs rather more than twice as much as the wool; so perhaps it is more correct to say they cleaned eight seers.

"For this they were entitled to one anna and three pie; out of this they were cut six pie advanced a few days before, and carried off only nine pies. They went off with this and gathered some 'bathua' (a wild plant which is edible); they had some makka (sufficient for about two days laid up at home); the mother made some cakes of this, grinding it on a stone, and they both ate it with the bathua. Each got about three quarters of a seer of the makka cake and one-quarter seer bathua by about 8 P. M. After this they went to sleep.

"During the day Mehtab wore a small pagri of dirty-white cloth, a dhoti of gārha, and a very old padded mirzai. At night he had an old kamal, which he bought more than a year ago partly on credit, but has since paid for.

"His yearly expenditure is about Rs. 32 for food, including that of his mother, and about Rs. 3-8-0 for clothes of all kinds. The food they get from their employers is included in this estimate. Of course on the day described it was paid extra, besides the cash payment on the cotton cleaned."

Amongst the labourers must be included those persons who earn a living by catching fish, and who are more numerous than might be supposed, amounting to quite two thousand in the whole district.

Carriers also other than servants employed on regular wages are included, and may be divided into those who drive carts and those who actually carry loads themselves.

The number of carters who live solely by the trade and are not also agriculturists, I think, but small. There are, however, a certain number in all the larger trading centres, and at Chandausi some of these men make a very comfortable living. The rates ordinarily paid are either by the day 6 annas for each bullock required for the cart, or by month Rs. 14 for a two bullock and Rs. 25 for a four, bullock cart; or by weight $\frac{1}{2}$ anna a maund where the distance does not exceed 5 miles and from nine pie to one anna where it does. The hire of donkeys with packs is from six to nine pie each a day, and for bullocks and ponies about 4 annas; bullocks are however rarely hired except with carts. The number of kahárs who live by load-bearing alone is not very large; most of them either own land or also do a day's work of other sorts.

8. From what I have been able to observe I believe that of late years there has been a considerable diminution in the numbers of the non-agricultural population. The rise in the cost of food and the scarcity of 1285 fasli, together with the terrible fever which followed in 1287 fasli, have, I believe, had this effect, and I should therefore expect the census which is now about to be taken to show a distinctly smaller number than the last.

* The mid-day meal is also given in addition to the money payment.

CHAPTER VIII.

EDUCATION AND GENERAL CHARACTER OF THE PEOPLE.

FROM a report kindly lent me by the Secretary to the educational committee, I find that the number of schools and pupils in the district is as follows :—

Statement showing the class, number of schools, and students in the Morádábád district.

Class of schools.	Number.	Number of students.			Total.	Remarks.
		Hindus.	Musalmans.	Others.		
Government English school ...	1	144	37	...	181	
Government vernacular higher class schools, except English.	10	236	229	69	534	
Government halkabandi ...	114	1,465	1,232	541	3,239	
Girls' schools ...	4	150	...	...	150	
Municipal aided by Government,	1	...	18	...	18	
Municipal unaided ...	3	18	22	9	49	
Mission schools, girls and boys ...	18	389	154	63	606	
Grand Total ...	146	2,403	1,692	682	4,777	

The total number of pupils is disappointingly small out of a population of considerably over a million, and it is noteworthy that of them about 13 per cent. are pupils of the schools established by the American Mission. The success of these schools has been considerable, and it is satisfactory to find that the people take advantage of them.

Education must progress very slowly in a country like India, where the mass of the population are living very little above the margin of actual privation, and it is perhaps satisfactory to find even two schools as well attended as the High School and the Mission School in Morádábád city. At the same time the truth must be acknowledged as regards the extreme feebleness of impression which our educational system has yet had on the mass of the population.

Generally speaking, they are still in the densest ignorance, although amongst the zamindars, and more especially amongst the Government servants, there are many men of considerable education. And the distance between the Muhammadan landlords and their Hindu tenantry has, as already remarked, had the effect of keeping the latter in a poorer and more abjectly servile condition than is usual even in this country. The growth of trade will probably do more to educate and raise the masses than our schools can. It brings with it independence, and requires a considerable amount of energy and industry. It thus tends to raise the character of the people who are generally deficient in these qualities, whilst at the same time the increase in wealth raises the standard of living. The zamindars as a body, when raised above the status of mere cultivators, are indolent, and much more taken up with sensual pleasures than with the good management of their estates; most of their business is done through karindás or lessces, and such an idea as the duty of improving their tenantry, apart from the chance of thereby increasing their own income, has hardly dawned on them. There are, I am bound to say, several honourable exceptions, but this is the general characteristic, and joined to the custom by which landed property descends to all the children instead of to only one of the sons, and to the consequent disinclination to seek for other means of living, it weighs very heavily against the prosperity of the agricultural classes.

CHAPTER IX.

FISCAL HISTORY.

THE information available on this subject prior to the last settlement is extremely meagre, nor do I see much use in discussing the previous assessments at length.

The following table shows the results:—

Table showing the result of assessment parganawar.

1.	2.	3.	4.	5.	6.	7.	8.
Name of pargana.	1st settlement, 1803 to 1805.	2nd, 1806 to 1808.	3rd, 1809 to 1812.	Average of the quinquennial settlement, 1838 to 1842.	Jama declared in the 9th settlement.	Jama as it stood when present settlement began.	Remarks.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Morádábád ...	63,260	59,878	59,98	60,168	1,81,480	2,02,254	The quinquennial settlement of 1813-1817 was, except in Thákurdwára, extended from time to time up to 1842. The average of the last five years has been shown here. In the 9th settlement several villages were brought in from Bijnor which account for part of the increase.
Thákurdwára,	1,35,323	1,37,201	1,62,881	1,77,707	1,80,800	1,81,962	
Bilári ...	1,95,112	2,07,891	2,18,508	2,24,907	2,31,968	2,47,030	
Sambhal ...	2,09,464	2,12,242	1,92,581	2,34,027	2,67,130	2,87,925	
Amroha ...	55,571	56,396	52,877	54,314	1,09,103	1,00,447	
Harjanpur ...	75,973	76,569	1,08,256	1,40,656	1,80,933	1,81,850	
Total ...	7,34,703	7,50,177	7,95,085	8,91,779	11,51,414	12,01,468	

The 5th, 6th, 7th, and 8th settlements were in all parganas but Thákurdwára were extensions of the 4th for further terms, and that pargana is therefore on rather a different footing from the rest of the district.

2. As in other parts of the country, when we first assumed government we were almost completely in the dark, not merely as to the individual right of the different persons we had to deal with, but as to the very nature of the rights considered abstractedly. Fortunately the facility with which our ignorance might be converted to their own profit was not immediately recognised by the unscrupulous members of our native staff, and by the time they appreciated it the opportunity had to a great extent passed. Fortunately, too, in most of the parganas the landowners had a sufficiently strong hand to hold their own, and it was not therefore worth while for a needy grasping speculator to take up the farms which we seem to have offered so freely. Nothing, I think, could help to realise more clearly the progress which has been made since those days than a perusal of the accounts existing in the office of the Board of Revenue of our procedure all over the ceded districts of the North-West during the first ten years of our rule. The first system seems to have been to ignore all rights and farm to the highest bidder, and from the report of the Revenue Commissioners in 1820 it seems that more than two-thirds of the revenue imposed in the triennial settlement was realised from farmers. The quinquennial settlement seems to have been the first in which we began to recognise the right of proprietorship which has since developed to what I venture to consider an excessive extent. Even then, all we recognised was a kind of right of refusal which, owing to the extreme severity of our laws of sale, was not unfrequently fatal to the zamindar who claimed it. During farm the zamindar was temporarily obscured and very

often was put to desperate traits to satisfy the farmer ; but the periods being short, if he was a man of any real position he re-emerged at its close. Once sold up, on the contrary, all his rights were gone at a swoop, and there can be no doubt but that several estates were acquired by the amlak of our offices in the most fraudulent and unjust manner under the cover of our sale laws. The very large area of revenue-free land and their own strength did a good deal to protect the wealthier Muhammadan zamindars ; but the petty men, like the Tagas of Hasanpur and the Thákúrs in Morádábád and Thákurdwára, suffered severely. The quinquennial settlement was more carefully made. The Board's attention had been directed to the abuses of the sale law* and to the claims of the zamindars, and the result was that more than half of the revenue was settled for with the latter and the farms were greatly cut down.

The extension of the term of this assessment by which it lasted thirty years* did great good by preventing the competition and irritation consequent on a new settlement, the evils of which were plainly seen in pargana Thákurdwára.

3. Regarding this I must here quote Mr. Crosthwaite's rent-rate report on that pargana :—

"While other parganas enjoyed the benefits of the several regulations which extended the term of the quinquennial settlement, this pargana was subject to continual revisions. Each revision brought its increase. It was held that the tenure of the mukaddams and other malguzars was only a farming tenure. The farmers were not thought deserving of any moderation in the demand, and the fact that the money must eventually be wrung out of the cultivators does not seem to have occurred to the revenue authorities. Mukaddams were pitted against talukdars and farmers against mukaddams, and the demand was literally fixed by competition. The result can best be described by the following quotation from Mr. Dick's report (paras. 9-16 inclusive) :—

"The state of the mahál was by no means so backward as to allow room for the supposition that improvement would keep pace with the demand. The reason for the increase has been already given, that the mukaddami tenures having been considered farms, the whole pargana has been held to be open to re-settlement at the expiry of each given quinquennial lease ; and while other parganas enjoyed the benefit of the several regulations giving the previous settlement continuance, in this every settlement officer endeavoured to raise as much additional jama as possible."

"The consequence of over-assessment had just begun to appear when the high prices of produce, caused by the failure of crops in most parts of the country in 1233 and 1234, enhanced enormously the assets of this mahál, in which the failure was less felt. On this followed the settlement of 1235 fasli. Deceived by the profits of the preceding two years, and urged on by the lamentable system of putting up the villages to auction and setting up adventurers to bid, the unfortunate mukaddams were induced to agree to terms which they could never discharge. The demand was enforced for two years ; the unfortunate people were utterly ruined, everything of property that they possessed was distrained and sold, and while they were appealing for justice their villages became worse by neglect. A few succeeded in obtaining from the Board of Revenue a remission of the increase, but not those who most deserved it ; and many whose villages were in reality not over-assessed followed the example of appealing, and by neglect or design their villages soon became in as bad a condition as those of their neighbours."

"The state of the pargana in consequence of these proceedings is already well known to the Sudder Board."

Years.	No. of changes.
1237	72
1238 and 1239	24
1240	28
1241 to 1244	50
	<hr/> 174

* For a further account of this see the Gazetteer of Gorakhpur, page 383.

"It is needless to add more. The statement of irrecoverable balances will be palpable evidence; and the circumstance that since 1237 fasli no less than 174 changes in the management of villages have been found necessary, many involving remissions of jama, though given with a sparing hand, will show the condition of the mahál.

"Although less difficulty has been experienced in collecting the revenue during the years immediately preceding the settlement, yet that does not arise from the weight of the previous assessment having been sufficiently lightened. The collections of the past ten years are stated in the margin. In most villages the demand had been so lowered that the malguzars could just pay; many have been transferred to farmers, who, hoping that at the settlement then immediately expected the villages would be continued in their hands on favourable terms, agreed to the former

Jama and balance and average collection of 10 years preceding settlement.

Year.	Jama.	Realized.	Balance.
	Rs.	Rs.	Rs.
1236 ...	2,75,058	2,73,225	2,633
1237 ...	2,61,031	2,48,983	2,648
1238 ...	2,52,144	2,47,229	4,915
1239 ...	2,52,611	2,48,099	4,512
1240 ...	2,45,310	2,38,314	6,996
1241 ...	2,47,131	2,45,883	1,248
1242 ...	2,48,404	2,48,377	27
1243 ...	2,48,979	2,47,965	1,014
1244 ...	2,49,039	2,44,355	4,675
1245 ...	2,42,412	2,45,659	6,753
Average ...	...	2,45,815	...

demand on speculation.

Average of 9 years, omitting 1245 fasli Rs. 2,49,159.
Ditto of 8 years, omitting 1245 and 1246 fasli, Rs. 2,41,151.

of the revenue came; a large proportion of the malguzars are chiefly indebted to them, and looking forward to the settlement, they thought it more profitable to risk more and keep their debtors from breaking down entirely than to refuse further aid with the certainty of losing the previous debt.

Balance.

Year.	At end of June.	At end of September.
	Rs.	Rs.
1237 ...	30,189	8,874
1238 ...	17,971	7,399
1239 ...	20,388	4,512
1240 ...	24,162	14,029
1241 ...	2,247	2,138
1242 ...	2,232	169
1243 ...	11,167	2,621
1244 ...	9,852	5,827

"The annexed statement of the balances outstanding in the June and September tauris will show with what irregularity the amount was collected."

4. With our present knowledge of the country and with the well-defined tenures we now recognise, such mistakes seem stupid and extraordinary. It is however, necessary to remember that the clear definition of the different proprietary titles has been a slow piece of work, only comparatively recently completed, and I also fully expect that our treatment of the subject of tenant right up to the present day will, fifty years hence, be looked back on with quite as much contempt as the errors of our predecessors on the cognate one of proprietary claims.

5. Regulation VII. of 1822 should have put an end to the system of farming, but unfortunately, as Mr. Smeaton says in his report on pargana Hasanpur, it was too perfect to be worked, and it was not till Regulation IX. of 1837 simplified and relaxed its provisions that the regular revision contemplated could be made. This is the reason why the quinquennial settlement was so often extended, and it was not till 1841 that the long-expected revision took place. Preparatory to it the district had been surveyed between 1831 and 1836, and a very full and exhaustive enquiry had been made with respect to all the revenue-free tenures above 10 bighas pukka, or roughly 6 acres, in extent. I have already mentioned the origin of these tenures in the history of the district. They consisted almost entirely in the grants made to the Saiads of mroha, though there were a few more recent which were allowed to some of the Rohillas shortly before the cession of the district, and numerous plots scattered over the district assigned to various shrines, mosques, and similar buildings. Special officers were deputed from 1837 to 1841, with the title of Commissioner of

Muáfi, to enquire into the validity of the rights claimed, and their proceedings were submitted for sanction to the Board of Revenue, most of whose orders bear date between 1840 and 1843.

6. The former settlements had all been made without survey and without any accurate idea of the area or natural value of the land settled. They were based on the figures of previous demands and on the 'dauls' or estimates of kanúngos and other native officials, checked by a very hasty supervision on the part of the European officer who made the assessment. In the new settlement an attempt was made to obtain accurate areas. The district had already been trigonometrically surveyed and the total areas of the different villages was known. Amíns were now deputed to make out field maps, giving the cultivated area in detail, but the value of their work may be judged from what Mr. Smeaton says of the whole system:—

Mr. Money's settlement.

"In estimating the quality of Mr. Money's settlement it is necessary to consider in detail the system adopted from survey to final assessment.

"In one-half of the district, including parganas Morádábád, Bilári, part of Sambhal, and Káshipur, the survey had been conducted on the old plan, 'under which the detailed survey included only lands under cultivation or lately abandoned, and the waste lands were surveyed professionally. The amount of waste land being deducted from the total area by the professional survey, the amount of cultivation and lately abandoned land was obtained.'

"Mr. Money had pinned his faith to these returns, but found himself woefully deceived. 'I am now certain,' he writes 'that the professional returns were fabricated to make them agree with the khasra surveys.'

The survey.

"In the other half of the district, including part of Sambhal, Hasanpur, and Amroha, the survey was made, 'under the new system of dispensing with what may be called the interior professional survey, with an azimuth compass and perambulator, of the total cultivated and total uncultivated lands of each village. That survey, when properly conducted, was an effective check on the detailed field measurements which were made by the amíns. The amíns felt when it was abolished that there was no check upon them * * * * * The great extent to which bribes were taken in that (detailed survey) department was a matter of too great notoriety to admit of any doubt. The system that was said to be pursued was variable. Sometimes the amíns were paid a fixed sum monthly; sometimes allowed to make what they could by bribery; sometimes they received a percentage. There were instances in which only about one-fourth of the land under cultivation was surveyed as cultivated. I had the survey returns corrected; but it was not to be expected that a correct return could be formed on such a basis, and the actual amount of cultivated land in the pargana is therefore unknown' (the italics are mine).

"To begin with, then, the foundation of the settlement was undermined. The areas upon which the settlement officer had to operate were virtually unknown; approximation was rendered difficult, if not impossible, by the variety of modes in which the figures had been doctored; so that, in effect, the primary data for assessment were purely conjectural."

7. In fixing soil classes the same want of time, and of a sufficiently reliable subordinate staff, occasioned similar injury. In pargana Bilári, for instance, Mr. Money found that the khasras were false, their preparation having been a matter of private arrangement between the tahsildar on deputation and the zamindars. When the discovery was made, the assessments were on the eve of being framed, so there was no time for thorough remission, and all Mr. Money could do was to send his Deputy

Collector to one part of the pargana and ride over the rest himself, taking rough notes as to the extent to which he thought the soils had been misstated.

The groundwork of an assessment based on the classification of soils within the cultivated area was thus rendered still more insecure, and had Mr. Money gone entirely on it, he would probably have been more out than he was.

As an example of the way Mr. Money framed his soil rates in tracts where cash rents prevailed, I will now quote from the Bilári rent-rate report, and to exemplify that followed in a tract where *batái* was prevalent from the Hasanpur report (both written by Mr. Smeaton)

Bilári.

"18. Mr. Money found rents almost universally paid in money. He obtained statements of the rent-rates generally paid from the *patwáris*, and classified the villages of the pargana according as they were represented in these statements as paying high or low rent-rates. Thus in two sub-divisions he had three classes of villages—the first class containing those in which, according to the *patwáris*' statements, rates up to Rs. 3 per acre were paid; the second including those in which rates a little above Rs. 4 per acre prevailed; and the third embracing the remaining villages in which the highest rates were paid. In the third (Narauli) sub-division there were four classes arranged on the same principle. Mr. Money then multiplied the areas of those villages in each class in which like rates prevailed by the average of these like rates, and obtained what he called their total 'rental.'

Mr. Money's mode of getting "rentals."

"He then arranged the areas of each class under their various soils.

"19. The soils adopted were:—

(1) *Matyár*.—Defined as a 'soil in which clay predominates.'

(2) *Sawái*.—'Clay in which there is a larger proportion of sand than in the *matyár*.'

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"Each again was sub-divided into irrigated and unirrigated. With the total 'rentals' and the total soil areas, all that was required was a ratio of value between the soils in order to obtain soil rates. Mr. Money supplied this ratio of value by assuming—

(a)—Irrigated *matyár* and *sawái*,

(b)—Unirrigated *matyár* and *sawái* and irrigated *bhúr*,

(c)—Unirrigated *bhúr*,

to have relative values in the ratio of Rs. 3 : 2 : 1. This proportion was not constant, but the variations permitted were rare and very trifling. Applying the rates thus determined to the soil areas, a total assumed rental was obtained on which the pargana assessment was calculated. The soil ratio of Rs. 3 : 2 : 1 was found by assuming the most prevailing rate of good irrigated land to be 12 annas per village *bígha*; of good unirrigated land or irrigated *bhúr* to be 8 annas; and of *bhúr* to be 4 annas."

Mr. Money's soils and soil rates.

"Finally, assessment. Apparently the 'mean village rates' ascertained by Mr. Orr were applied to the survey areas, and the result was called the 'deduced rental.' Then the *kanúngos*' *dauls* were compared with this 'deduced rental.' With the aid of these two sets of figures the 'pargana jama' was arrived at. To quote Mr. Money's words, 'the aggregate of the *kanúngos*' *dauls* was Rs. 1,83,310. * * * The former actual demand, Rs. 1,32,000, was notoriously inadequate, and finding that six-tenths of Rs. 3,10,461, the total (deduced) rental, amounted to Rs. 1,86,277, * * * I could not, with reference chiefly to the rate on the *malguzari*, fix a lower pargana jama than Rs. 1,86,277.'

Hasanpur.
His mode of assessment.

"After this pargana jama had been fixed, the settlement officer worked back and calculated the 'rent-rates of each kind of soil in each class.' How this reverse process was accomplished may be illustrated by the following quotations from the

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Hasanpur.
His mode of assessment.

"After this pargana jama had been fixed, the settlement officer worked back and calculated the 'rent-rates of each kind of soil in each class.' How this reverse process was accomplished may be illustrated by the following quotations from the

report :—"It is difficult to fix the rent-rates of this (second) class. Taking it for granted that the total estimated rent is correct, it is evident that there must either be a deficiency of irrigation or an excess of bhúr in the statements, more probably the latter. The amount of irrigated land is so small that no rate assessed on it, unless one unreasonably high, could have the effect of moderating the rent-rate of the unirrigated land."

"It would be difficult to imagine a settlement conducted on such principles now-a-days. Allowance must of course be made for the haste which seems to have been insisted on. But even after every plea is urged, I think it must be admitted that from beginning to end the proceedings were of the most haphazard character, and the method bad."

"The real settlement officers of the district were the kanúngos. Their dauls decided the assessments virtually. The area statements, village and soil classifications, rent statistics, even had they been accurate, would have had no real influence on the ultimate result. As it was, the areas were false, the soil and rent statistics were obtained second-hand, and the village classifications were made on a principle which is obviously unsound and misleading."

8. With an assessment thus made, the natural result was that, as a rule, the jamas were too light (considering that they were supposed to represent three-fifths of the estimated assests), and that when in the last pargana, Hasanpur, Mr. Money tried to meet the frauds practised against him and imposed a pargana jama which was not too light, its distribution fell unevenly and was rather severely felt in some of the villages. All things considered however, it says something for the estimates furnished by the kanúngos and for the recorded rentals that Mr. Money was not more out than he was, for the information obtainable from his own records must have been nearly altogether unreliable.

9. Pargana Thákurdwára was separately settled by Mr. Dick in 1840. His survey seems to have been carried on in pretty near the same way as that in Morádábád and Bilári; but he had more time to inspect and check the work, and he seems to have gone more on his own knowledge of the capabilities and actual rentals of each village than Mr. Money could. His basis was therefore rather more reliable, and his assessment was probably a fairer one, though, owing to the way in which the malguzars had become involved in debt, it did not work satisfactorily.

10. Throughout the district the principle of settlement with the zamindars, that is with the persons found in possession of proprietary rights, was recognised, and farm was only allowed in the few cases where they refused to engage for payment of the revenue.

11. Setting aside the khám tahsíl management of 137 villages in Thákurdwára between 1860 and 1863, the coercive processes found necessary to get in the jama were very few indeed. In Bilári none, in Sambhal only 6 maháls out of 705, in Amroha only 4 out of 212, in Morádábád 10 out of 479, and in Hasanpur 27 out of over 1,000 had to be farmed, and in two cases sold. Both Mr. Crosthwaite and Mr. Smeaton clearly state that there is abundant evidence that the jamas in all these parganas were easily collected.

The very marked rise in the value of property during the term of settlement is also pretty clear proof of this. Taking private sale as the gauge, it appears to be as follows :—

Pargana,	Price per acre.					
	1st decade.		3rd decade.		Average for 3 years.	
	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.
Thákurdwára...	5	12 0	15	0 0	7	11 4
Morádábád ...	4	10 5	13	5 4	9	2 6
Bilári ...	9	10 10	17	14 6	13	5 2
Sambhal ...	5	11 1	12	7 10	8	12 9
Hasanpur ...	5	7 6	15	6 5	9	12 10

The prices at which muáfi sold were on an average rather more than twice those of the khálsa, and have not increased quite so much during the same term. The areas dealt with are, however, too small to base any sound induction on. It is worth noticing that in all the parganas the increase in value has chiefly occurred during the last ten years preceding the new settlement.

On the other hand must be noted the very large extent of the transfers which have occurred during the same term. Setting aside revenue-free land, the proportion transferred in the different parganas since settlement seems as follows:—

Thákurdwára, two-thirds.
Morádábád, two-fifths.
Bilári, rather over half.
Sambhal, about half.
Amroha, not known accurately, but about one-third.
Hasanpur, two-fifths.

And from the authorities above quoted I gather that transfers have been more frequent than ever during the last ten years before settlement.

12. The reasons for this are, I think, as follows:—Land prior to the last settlement, when proprietary rights were first determined with some degree of certainty, had comparatively little value in the market. No outsider felt at all sure that he would get possession of anything tangible, and the moneyed class not only lent less freely on landed security than they do now, but were less desirous of evicting the borrowers, and more often preferred to leave them in possession and extract what they could from them in the shape of cash. Secondly, there was not the same amount of money seeking safe investment as there has been since the trade of the district developed, and the price of land was not sufficiently high to tempt the proprietors to part with it till actually forced to do so, whereas now sales are not unfrequently made without such necessity. Thirdly, the increase is without doubt to some extent simply a paper one, owing to the list of transfers being more accurately kept and fewer escaping record.

13. The chief point I wish to bring to notice is the undoubted rise in the value of land, owing partly to the increased value of produce, partly to the presence of larger supplies of money in the district, and partly owing to the better security afforded to lenders under a more advanced system of administration. It must be allowed by any one who has studied the subject that the position of the zamindars in this district has enormously improved under our rule. The Rohillas virtually recognised no such right except in those who were strong enough to defend actual possession, and even under the first ten years of our government it was almost as completely ignored. We have now built up a structure of rights which is inconveniently strong, and which joined to the facility of transfer threatens to become a grievous burthen on the cultivators, who are, after all, the real backbone of our revenue system. Under native rule and for some time under our own, the zamindar was merely the State's agent to collect its revenue and manage its estate. Now he is almost recognised as absolute owner of the land, with a right to manage or mismanage as he likes, provided he pays a certain yearly sum to Government. I do not mean to assert that I consider that the cultivators are much worse off now than formerly; on the contrary I believe and admit that not only the zamindars, but the tenants also, have advanced materially and are better off now than they were. But this is owing to the increased security against forcible robbery and bloodshed which our administration has afforded: it is not due in the least to the extension of the zamindar's rights. On the contrary I hold that we have missed a golden opportunity for richly benefiting the agricultural classes in not insisting on the paramount right of the State more strongly, and more especially in not insisting on the zamindar being responsible not merely for payment of revenue but for good management also.

14. Before concluding this chapter it is perhaps well to give a brief account of the progress of affairs in Thákurdwára. Mr. Dick, as already shown, saw clearly enough the injury which had been done by the previous assessments, and he fixed a jama which seems to have been fair enough at the proportion then taken of the esti-

mated assets. But owing first of all to the extent to which the malguzars had already become involved, and also to the fact that the proportion of three-fifths, or sixty per cent., was too high to work well if taken at all strictly, the pargana soon got into difficulties. Had the whole pargana been kept khám tahsíl from the commencement of our administration it might have turned out a great success, and we might have kept the padhás in a state of comfort and prosperity instead of ruining them. As it was for over fifty years we sought by every effort to get rid of the task of direct management, and then attempted it when both zamindars and cultivators were utterly exhausted and deep in debt. Their condition may be judged from the following extract from Sir John Strachey's report in 1859:—

“The landholders of nearly the whole pargana were by this time involved in debt to such an extent that the payment of even the reduced demand was a matter of great difficulty. The profits from rice cultivation in Thákurdwára are very large when the rains are abundant; but in a country thus dependent on a single crop, with immense and frequent fluctuations in prices, no tolerable roads, and a poor and ignorant population, we have all the elements likely to produce a miserable condition of things. One man, the banker Baijnath, completed the ruin of the malguzars of Thákurdwára. Taking advantage of the difficulties into which they were thrown by the pressure of the Government demand and by bad seasons, he was always ready to advance the money necessary to relieve them from their immediate difficulties. Their attachment to their land, their anxiety to prevent its transfer to strangers, and their ignorance and simplicity, all combined to throw them entirely into the power of this unscrupulous money-lender. His operations were not those of an ordinary usurer. I need not here describe how they were carried on. It is sufficient to state the broad fact that no malguzar who has become indebted even to a trifling extent to Baijnath has ever succeeded in escaping ruin. The civil courts have been the ready instruments for all his extortions and for all his unscrupulous proceedings. It has not, however, been ordinarily his policy to deprive the malguzars of their property in the land. It is more profitable to leave them in possession, and it is only when it seems hopeless to squeeze any more out of them that Baijnath transfers the property to a fresh victim. Creatures of his own are the ordinary purchasers, for no one else will buy property in Thákurdwára. Baijnath keeps hardly any estates in his own hands: such is his influence that he can always dispose of them to some of the landholders of the pargana who have already fallen into his power, or he can reinstate the old proprietors on his own terms.

“Under these circumstances no mere reduction in the Government demand would give any relief to the landholders of Thákurdwára. The sole result would be that Baijnath's profits would be made still larger than they are. No remedy, it seemed to me, could be efficacious which left the malguzars entirely dependent upon Baijnath's mercy. If there had been any tendency to the gradual replacement of these ruined proprietors by people of greater capital and enterprize, there might have been something said in favour of letting things take their own course. But the experience of the last fifteen years has shown that there is no tendency of the kind. No one willing to invest capital will buy property in Thákurdwára, nor can even farmers be got from other parts of the district. For the present at any rate we must be content to assume that these ruined proprietors are the only people through whom we can work. And in my opinion, even if it had been possible, by ousting the old proprietors, to place things on a better footing, we should still have been under a moral obligation to do what we could to save them for this reason, that our own over-assessment was the original cause of their ruin.”

In accordance with Sir John's opinion khám tahsíl was tried, but after three years it was proved a failure and given up. This result was inevitable when the law had left the Government no power of compromising the creditor's claims or preventing the civil courts from transferring the proprietary rights to him, and when both zamindars and cultivators were deep in debt.

At the same time the arrangement resulted in one good effect. It gave the creditors and zamindars both a fight, and thus checked borrowing, for neither were quite certain about the extent to which Government's powers were limited, and both were afraid that the villages might be kept in khám tahsil for ever.

This, joined to the rise in prices which shot up just about the time the villages were released, enabled some of the zamindars who had not gone so far as others to draw back and compound with their creditors. A very large portion of the pargana passed, however, into the hands of Baijnath or his son Mukand Ram, and few of the old padhāns were left as proprietors when the present settlement commenced.

15. The jama as declared will be seen from the statement at para. 1 to have been rather more than Rs. 50,000 below that which was current when the present settlement commenced. This was owing to the following causes:—

Statement of net increase and decrease due to the following causes.

Pargana.	Progress in jama.		Transfer from other parganas.		Alluvion and diluvion.		Resumption of muáfi.		Other causes.		Total.		Remarks.
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Morádábád	1,449	419	16,325	...	a 4,731	b 1,312	22,505	1,731	a Rs. 4,731, other causes unknown owing to destruction of records in mutiny.
Thákurdwára...	1,814	3,220	5,544	...	c 69	c 3,045	7,427	6,265	b Rs. 1,312, land taken for public purposes, also other causes unknown.
Bilári	20,185	...	...	d 5,123	20,185	5,123	c Rs. 3,045, over-assessment; 69 other causes.
Samyhal	22,170	...	...	e 1,375	22,170	1,375	d Rs. 5,123. Land taken up for public purposes.
Amroha	607	100	{ 2,859 4,527 }	10,953	...	f 6,496	7,993	16,649	e Rs. 1,000. Remission on account of land for public purposes; Rs. 357 for other causes.
Hasanpur	2,225	3,063	2,224	...	...	469	4,449	3,532	f Rs. 4,263 struck out of land revenue and put to nazrána.
													f Rs. 934 on account of severity of jama.
													f Rs. 1,209, other causes.
Total	6,095	6,352	74,184	10,053	4,800	17,820	84,729	34,675	Net increase, Rs. 50,054.

The principal cause was, it will be seen, the resumption of muáfi, chiefly due to confiscation in the mutiny, but partly to the falling in of life muáfis and the resumption of a few in which the title was considered invalid, and was finally disallowed by the Board after the enquiry made by the Commissioners had terminated.

It is necessary to note that nearly Rs. 5,000 on this account in pargana Bilári, though rightly shown, were really never realised, half the jama assessed on certain confiscated lands concerned being released for the life of the grantee. This is why Mr. Smeaton shows only Rs. 15,079, as increase under this head in his Bilári rent-rate report.

The Rs. 10,053 decrease shows jama at first assessed on certain maháls, including the greater portion of kasba Amroha itself, which were subsequently proved to be revenue-free.

CHAPTER X.

CHRONOLOGICAL SKETCH OF THE PRESENT SETTLEMENT OPERATIONS.

In September, 1869, in view of the approaching revision of settlement, Munshi Sana-ulla, Deputy Collector, was appointed, under the supervision of the Collector, to determine the village boundaries and survey the lines which define them.

He continued working for a year, when in October, 1870, in accordance with the decision arrived at by the higher authorities, the survey of the district was made over to a professional staff of amíns under Major Vanrenen, and Munshi Sana-ulla was transferred to Fatehpur.

In November, 1872, when the survey had made some progress, settlement operations opened under the supervision of Mr. C. T. Crosthwaite,* aided by Mr. D. M. Smeaton as Assistant, and Munshi Devi Parshad as Deputy Collector.

* Appointed by G. O. 1275 A., dated 9th August, 1872, (see appendix A).

In 1873, the preparation of the rough record of rights¹ was nearly completed in pargana Morádábád, and a considerable portion of it was inspected by Mr. Crosthwaite.

In 1874, the rough records of Morádábád were completed, and those of Bilári and Thákurdwára well started, Munshi Imam-ud-din having joined the district as Deputy Collector in February. Inspection of all three parganas was also pretty nearly finished, though the submission of the rent-rate reports was delayed by Mr. Crosthwaite's being absent on leave during six months of the year.

The rent-rate reports of all three parganas were, however, submitted at the end of 1874 or in the course of the next year 1875. Mr. Crosthwaite left in March of the latter year to take up the Secretaryship to the Board of Revenue, and was succeeded in the charge of the settlement by Mr. Smeaton. At about the same time Mr. T. R. Wyer joined as Assistant, and Munshi Ram Sahai as additional Deputy Collector. The revised assessments of pargana Morádábád were declared in April, and those of Thákurdwára and Bilári at the close of the year, the former having been delayed by the necessity of resurveying a large number of maháls on the Rámghanga river. The record of rights of pargana Sambhal was started, and the fairing of the records in Morádábád was nearly completed.

In 1876 Mr. Smeaton was engaged during a considerable portion of the first six months in inspecting pargana Káshipur, which, though out of the district and attached to the Tarái, was temporarily brought within his jurisdiction for purposes of settlement. He also inspected Sambhal and submitted the rent-rate report at the close of the year. The preparation of the record of rights in Amroha was commenced under Munshi Ram Sahai and Mr. Wyer, and the fairing of the Morádábád volumes was completed. The patwáris' circles were also revised in Morádábád, Thákurdwára, and Bilári.

The record of rights for pargana Morádábád, which had been delayed owing to its being found necessary to revise it when on the point of completion, was lodged and the pargana closed to settlement under Government Notification dated the 15th November, 1876.

In 1877 the detailed assessment of Sambhal and Káshipur was carried out, the new jamas being given out in May and December, and the inspection of Amroha was also carried out. Mr. Wyer was transferred to Budaun in May, and for the rest of the year Mr. Smeaton remained without an Assistant. The survey of the district was completed in this year as far as out-door work was concerned, though it was of course some time longer before the whole of the maps were completed. The halka-bandi of Sambhal was also revised at the close of the year.

In 1878 the inspection and record of rights of pargana Hasanpur were commenced. I joined Mr. Smeaton in January and assisted him in this work. The rent-rate report of Amroha was submitted in March, and in April Mr. Smeaton left on six months' furlough. During his absence I gave out the new jamas in pargana Amroha and completed the lodging of the faired record of rights for Thákurdwára and Bilári. These parganas were closed to settlement in November, 1878, and about the same time the revision of the patwáris' halkabandi in pargana Amroha was completed. Mr. Smeaton returned in October, and the inspection of Hasanpur was completed early in 1879.

In 1879 the rent-rate report of Hasanpur was submitted in February, and the detailed assessment was commenced before Mr. Smeaton left for Burmah in April. From the date he left I was put in charge of the settlement, having under me the three Deputy Collectors who had all been working for some time in the settlement. The revised jamas of Hasanpur were declared in June, and the preparation of the rough record of rights was completed before the end of the year. Parganas Sambhal and Amroha were closed to settlement in September, 1879, and the last maps were received from the Survey Department about the same time.

In November, Munshi Imam-ud-din, Deputy Collector, died, and a little later, on my being deputed to Bulandshahr on a special enquiry regarding owner's rate, Mr. H. Z. Darrah joined as Assistant Settlement Officer.

During 1880 the records of Hasanpur have been faired and lodged and the halkabandi revised. The pargana was closed to settlement by notification dated the 30th July, and since then we have been occupied by cases, the final report, and all the miscellaneous work which is always found to be done at the close of a settlement.

Including the survey operations, the actual settlement has thus occupied just eight years, and has cost a little over nine lacs.* The time and money spent are both serious items, but I think that in neither one nor the other has more been spent than necessary, considering the very heavy work that had to be got through. This work I now propose to treat in detail, as it appears to me to be the very essence of a final report to show clearly on what lines the work proceeded, what mistakes were made, and what difficulties encountered, and what course experience pointed out as the best to follow in order to avoid or meet them.

* NOTE.—For particulars of the expenditure see appendix C.

CHAPTER XI.

SURVEY AND THE PREPARATION OF THE ROUGH RECORDS.

WITH survey, except in so far as it directly bore on settlement work, I consider I have nothing to do, and I shall not attempt to discuss it at any length, though I must take the opportunity of noting my admiration of the great accuracy with which the work appears to me to have been done.

2. The system followed was for the survey to make out the field map, to fill in part of the khasra, and then to hand copies of both over to the Settlement Department.

At first the mean breadth and length of the plots was given, but this was very soon decided to be an entirely unnecessary piece of work, and it was stopped before more than a hundred khasras had been prepared, and was altogether omitted in fairing. The area has always been shown by the survey in acres and decimals,* and has been turned into the corresponding area in local bighas by the settlement office almost invariably before the khasra was sent out for the filling in of the other columns.

3. There are two different measures generally recognised for the kucha bigha in this district; one in Thákurdwára, the square of length of the local *jarib*, which is 27·26 yards in length, and the other in the rest of the parganas, the square of their *jarib* 27·50 yards in length. Besides this, in several of the villages brought in from Bijnor there was another kucha bigha rather larger than either, and apparently not on any very accurately fixed scale. This last has, however, been discarded, and only the two abovementioned employed.

In thákurdwára, therefore, the kucha bigha is 743·11 square yards, and in the rest of the district 756·25—in other words $6\frac{2}{3}$ of the former and $6\frac{2}{5}$ of the latter roughly go to an acre. I may also note that to complicate matters still more, three bighas kucha go to a pukka bigha in Thákurdwára as in Bijnor, whilst four go to it in the other parganas. In the khasras, however, only the kucha bighas were recorded, as the pukka bigha is hardly ever used by the people themselves.

4. The form of the khasra was slightly modified by the Board's rules issued in 1874, more detail being shown under the heads of 'barren' and 'culturable.' This revised form has been used in all parganas but Morádábád, and is given below :—

Survey No.

Form of khasra used in all other parganas than Morádábád.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
No. of field.	Thok or patti.	Name of proprietor, with father's name and caste.	Name of cultivator, father's name, and caste.	Total area in acres.	Total area in kucha bighas.	BARREN.			CULTURABLE BUT UNCULTIVATED.					CULTIVATED.					Class of soil.	CROP.	
S.				S.		Usat.	Jhúl. &c.	Other sources.	Jhari.	Long grass.	Págha.	Old waste.	New fallow.	Well.	Canals.	Other sources.	Dry.	Total of cultivated area.		At the time of survey.	At the time of girdawari.
						S.	S.	S.	S.	S.	S.	S.	S.	S.	S.	S.	S.	S.		S.	

Columns marked S. were filled up by the survey, though they were only responsible for the correctness of 1, 5, 19, and 21; the other columns being all either filled in or gone over again by the settlement staff.

* This area we accepted as correct, unless the fact of error was brought to our notice during our work. We did not consider it part of our work expressly to test the accuracy of the survey, though incidentally our own work checked it very thoroughly.

5. The first task, therefore, which the settlement staff had to perform was to complete the khasra and prepare the rough jamabandi. The form used for the latter was as follows, though of course in Urdu, and the way the work was done is described by Mr. Crosthwaite in a letter to the Board of Revenue in March, 1874:—

Parcha jamabandi, mauza

, pargana

, for 12 fasli.

Name of thok or patil and proprietor.	Serial number.	Name of cultivator, with father's name, caste, residence, and period of cultivation.	No. of fields entered in khasra.	Names of fields.	TOTAL AREA.				UNCULTIVATED AREA NOT PAYING RENT.				CULTIVATED AREA OR UNCULTIVATED IF PAYING RENT.				Remarks.
					Area in bighas.		Area in acres.		Area in bigha.		Village bigha according to survey.		Cash rent.		Batai area.		
					Bighas.	Biswas.	Acres.	Decimal.	Bighas.	Biswas.	Acres.	Decimal.	Area.	Rent.	Area.	Zamindar's share.	
																Name of crop always to be recorded in this column also; if necessary, name and rent of shikmi tenant.	

"(1.) This work is done at the same time with the preparation of the khatiauni. Lithographed khatiauni slips are prepared, and two men are sent to each village, one responsible for the soils and the entries in the khasra, the other for the khatiauni.

"(2.) The asamis, patwari, and zamindars are collected, and work is commenced by giving a blank lithographed slip to each asami. The two girdawars with the people then go round the village field by field; as one man fills up the khasra, the other makes the entries in the khatiauni, the asami who holds the field presenting his slip to be filled in.

"(3.) Some of the columns of the khatiauni, e. g., the village bigha column, are filled in afterwards.

"(4.) Everything is put down in the khatiauni,—crop, kind of soil, rent, &c.,—as in the khasra.

"(5.) This work proceeds at the rate of about 125 acres per diem to each couple of men.

"(6.) It is supervised during progress by experienced munsarims and by Mr. Smeaton and myself; all the soil areas being carefully demarcated on the maps as well as in the khasras.

"(7.) On completion of a village, it is sent to the munsarim of the circle, who has a staff of muharrijs to test the entries, make the totals, and compare khasra with khatiauni.

"(8.) On the completion of a pargana, it is divided into circles, and munsarims are sent to each village to attest the entries for each cultivator, as to area, occupancy, and rent. In case of dispute he reserves the case, after making enquiry, for the Deputy Collector. He prepares the rough khewat at the same time and gives a copy of the entries in the khatiauni which concern him to each asami.

"(9.) When this has been completed, the work is ready for the Deputy Collector. The Deputy Collector is ordered to test every man's holding separately, and the signature of the zamindar, patwari, and Deputy Collector, with his certificate of

attestation and agreement, are affixed to each holding. He is also directed to fix his camps so that no man shall have more than four miles to go. These orders are strictly enforced.

"(10.)—In case of any dispute, a formal proceeding is recorded, the matter judicially decided, and the record made accordingly.

"(11.)—The khewat is attested at the same time, when the co-sharer's attendance can be obtained. All clauses in the wajibularz affecting the tenants are also then drawn up.

"(12.) The jamabandi is merely a copy of the khatiauni with some of the columns omitted.

"(13.)—The wajibularz is written either at the same time or after the attestation of the khatiauni whenever the presence of the zamindars can be obtained. The headings have all been laid down by me; and the zamindars state what they wish recorded to a muharrir, and when the rough draft is ready, it is read out to the zamindars by the Deputy Collector in person, and their agreement recorded."

6. I have given the letter in full as it puts briefly and clearly the whole process of preparing the rough record of rights. Reverting now to its commencement, the chief difficulties found in the preparation of the khasra and parchas were as follows:—First, owing to the non-attendance of the cultivators during survey a large number of fields which should have been measured separately were clubbed, especially in the rice-growing villages, where, after the crop has been cut, it is very often extremely difficult to recognise the boundaries.

Second, owing to the land having sometimes been surveyed a year or even more before the settlement staff filled up their records, many plots which had at survey been cultivated were now found fallow, and fallow or old waste was often found cultivated. The boundaries of fields were also often found to have shifted, and this being a change which was less obvious than the others required special attention in both the bhur and jhil villages where such changes are not unfrequent.*

Third, without the maintenance of a large and very expensive supervising establishment, it was impossible to ensure the girdawars really going to every field and there recording the entries concerning it, and it was next to impossible to ensure the constant attendance of the zamindars and tenants required to obtain absolute accuracy in any village of real difficulty.

Fourth, the khatiauni and khasra, being prepared together, in case of error formed no check on each other; where therefore the work was carelessly done, many errors might creep in which were very hard of detection at time of attestation, and which were therefore likely to pass till the records had been faired and perhaps lodged.

The first was in great measure overcome before survey concluded, attendance being insisted on and the survey amins receiving special orders to be on their guard against the error. In the parganas first taken up, however, it gave a good deal of trouble, and in some cases the map was much disfigured by the alterations which had to be made.

The second was a more serious matter; clubbed fields were separated by red lines into the required plots or tukras as they are called, and new cultivation, taking in a *portion* of some number before shown as waste or jhil, was demarcated in the same way. All this, however, spoilt the look of the maps, and where *whole numbers* marked as cultivated had become waste, or *vice versa*, no change was made, so that the map

* Carrying out these changes cost a large sum, for besides our own establishment we had to pay for the amins who altered the surveyor's copy of the map. See appendix E.

really showed a state of things different from that shown in the khasra and khatiauni slips. This was, I think, a mistake and, as I shall go on to show, it was much aggravated by subsequent proceedings in many of the parganas.

The third simply involved a rather large but absolutely necessary expenditure and considerable trouble and worry to the supervising establishment. I have no hesitation in saying that *the only way* to obtain any really accurate records is that insisted on by Mr. Crosthwaite—a partial of every single field *on the spot*, and no trusting to second-hand oral information collected at the chaupál or under a shady tree perhaps half a mile from the land under record. With all but the best men it was all through a fight to insist on their doing the work in the right way, which they hated, and to prevent their doing it in the latter, which they loved. Towards the end after, we had weeded out the bad men, and after it had come to be known that the toil must be endured, there was less trouble; but, even then, often and often have I come on the girdáwar and his assistant lolling on chárpais with the patwáris and tenants squatting round them in some cool retreat. Nothing but constant driving will get work of this kind really done in this country, where the very people it is designed to benefit are the most averse to aid, and the readiest to encourage the officer doing it in shirking his duty. On the whole I believe the rough record of rights to have been extremely accurate, and the expenditure incurred in preparing it was not thrown away.

The fourth was not a really serious difficulty. Some cases no doubt did occur where it would have been of use to have two records drawn up independently for comparison; but on the other hand the good which resulted from having two men always working together, and thus checking each other's proceedings, and from the expense saved in being able to supervise both together, far exceeded any loss. In Amroha Mr. Smeaton attempted to make a check by causing the patwáris, independently of the girdáwar, to prepare a separate khasra. Comparison revealed a most alarming number of discrepancies in the first villages tried, but enquiry proved the almost complete accuracy of the girdáwar's work, and it was soon found to be merely waste of time and money to carry on the system; the patwári's work being so abominably incorrect, and the number of errors found in the settlement papers by this means hardly appreciable.

7. In the process mentioned in para. 7 of the letter, the chief difficulty found was that the work then done was likely to be intiated by changes made at attestation, which are always numerous even when the khatiauni has been prepared with great care, and practically it has been proved better to postpone the comparison of the two papers and the preparation of the 'safahwár' and 'tirij' till after attestation, if the latter can be carried out rapidly enough to allow of this.

The 'safahwár' is the record on which the totals of each page of the khasra showing area, crops, and soil classes are recorded.

The 'tirij' is the abstract of each parcha in the khatiauni, showing the area held in sir, shudkásht, maurusi, ghair-maurusi, and shikmi tenure, with the rent if paid in cash.

These two statements are the foundation of the assessment, the information they contain when totalled mahálwár being recorded on the No. II. statements. And it is therefore imperative that there should not be much delay in their preparation. On the other hand, if they are prepared before the numerous changes consequent on attestation and on the decision of the disputes then arising, the extent to which they have to be altered is a very serious difficulty indeed. The golden rule is, therefore, to make arrangements for securing the progress of attestation as rapidly as possible after the fixing in of the khasra and khatiauni, and also securing the rapid and systematic comparison of the two records and the preparation of the safahwár and

tirij immediately after attestation. To do this is in practice about as hard a piece of work as any in the whole course of settlement, and nothing but constant and unwearying supervision on the part of the officer in charge will effect it. I am quite certain, however, that it should be insisted on. Negligence or slipshod work at this time results later on in a mass of troublesome unsatisfactory work, which should be avoided by every possible effort.

As regards the process in the first part of para. 8, I say from experience the less of it the better. I never found the khatiauni much improved by the munsarim's attestation, and it wastes a great deal of very valuable time. It is much better to secure thorough supervision of the preparation of the record whilst it is being filled in on the spot, and leave all attestation to the gazetted officer, who must do his work himself thoroughly. It is also much better not to give copies of the khatiauni before his attestation, as it causes additional work of a very heavy kind to recover these copies and make corrections on them in cases where alterations are found necessary. If the work of attestation is done properly by the gazetted officer, no one should be uncertain what he is attesting, and of course a reasonable time would always be allowed for enquiries afterwards, and objections brought within such time admitted unless *prima facie* unreasonable. Against the preparation of the rough khewat by a munsarim prior to attestation there is no objection—indeed, it is absolutely necessary. The only danger lies in the munsarim being trusted too far, and the thorough attestation of every single entry before the gazetted officer not being insisted on.

The rules in paras. 9 and 10 are very good, and the record of some formal proceeding before alterations are made cannot too strongly be insisted on. Once this golden rule is transgressed and the attesting officer or his subordinates begin to make changes or additions without recording clearly in a separate proceeding what they have done, the value of the papers diminishes 50 per cent. I shall have more to say on this point further on.

Para. 13 should be put before 12, as the wajibularz forms part of the rough record of rights, whilst the jamabandi in this district has always been a faired paper. In practice it has proved necessary to draw out the wajibularz like the khewat, by means of a special munsarim before attestation, and if this can be done early enough to allow of its being taken up and tested at the time the supervision of the khasra-khatiauni work is going on, this will be found much the best plan. It should, in my opinion, always be attested by the gazetted officer at the same date as the khatiauni and khewat, so many of its provisions being of general importance to the whole village, and it being exceedingly difficult to secure the attendance of the whole body of cultivators and zamindars a second time.

CHAPTER XII.

ON RECORD WORK SUBSEQUENT TO ATTESTATION.

ATTESTATION being once over, the point is reached where the double character of the settlement records forces itself on the attention. In one character they are statistics collected for the purpose of assessing and distributing the Government revenue. In the other they are the register of private rights in the land and its produce, and their correctness is of great importance for the security of these rights and for the prevention of disputes regarding them.

2. I cannot here refrain from expressing the sorrow with which I see how extremely little is generally understood of the way these papers are made out, and how little attention is paid to the enormous labour and expense at which they have been prepared, even in most of our own courts. I believe I am not exaggerating when I say that owing to this they afford scarcely any security to the parties recorded as in possession by them, and that a man who has fairly fought all through the numerous proceedings and appeals in the settlement courts finds, time after time, when he thinks his trouble is ended, that he has to begin all over again in the criminal, then in the revenue, and after that in the civil courts, and, unless he has a long purse as well as a good cause, is as likely as not to be defeated almost at the very end.

To no country does the maxim *inter est reipublicæ ut sit finis litium* apply more strongly than to India with its exceedingly poor and ignorant population, and it certainly does strike me as a terrible waste of power and money that the painfully minute enquiries which have to be made in preparing a record of rights should result in nothing more than a mass of books, which hardly any one takes the trouble to open. I do not pretend to say the record of rights is absolutely correct; what I do say is that the knowledge that the fact of his having wilfully absented himself at time of attestation, and never objected within reasonable time afterwards, or even of his having been present, and having actually attested, or at all events not objected to, an entry, will not be considered as *at once and by itself* barring a man from ever again questioning the accuracy of the entry, must have and has had, the effect of making the people careless and indifferent about what is attested, and that the errors which are found will, in nine cases out of ten, be found to have been occasioned by this negligence. Should a record of rights be prepared in the new settlements which will ere long commence, I would strongly urge the law not only making attestation a compulsory duty on all concerned, but also barring any disputes being raised as regards the correctness of entries made at attestation after a reasonable time has elapsed, not merely in the settlement, *but in all other courts.*

3. Apologising for this digression, I now proceed with my account of the records. For the purpose of the assessment the data obtained in the preparation of the rough records are almost always sufficiently correct, and with so heavy a task to get through the first impulse is to compile the statistics as rapidly as possible and proceed to assessment. In order however to insure accuracy in the record of rights, more time is required. Five hundred villages, which may be taken as about the average of a pargana, cannot be all paraded and attested, the disputes settled, and the misls faired and lodged in the course of a single year. It is necessary, as Mr. Smeaton says in one of his annual reports, that the records should be sufficiently *advertised*, that the patwari should receive copies and have time to study them, and that the numerous disputes which arise should be enquired into and decided before the record is finally faired out. With patwaris' records kept up at all fairly accurately, the work should be much more rapid and less troublesome; but with a mass of almost use-

less papers, copies in great measure of former papers which even when first made out were not really accurate and which are now completely out of date, the work in a district like this was extremely heavy.

For instance, in a very large number of muáfi maháls, though zamindari rights of the kind described in chapter IV., were proved to exist, no khewat whatever had been kept up of them; and in hundreds and thousands of cases what were originally single milks or proprietors had been broken up into many different plots without there being anything to show this in the patwáris' papers beyond at most a brief note to the effect that division had taken place, no details being given.

4. Without occupying more space, I may say briefly that it was simply impossible to complete and fair out the record of rights in as short a time as that in which it was absolutely necessary to make out the assessment statistics. The latter, therefore, were prepared at once, and the former work was done more leisurely. In another chapter I show the information collected for assessment purposes; here I need only say that all which was required from the record of rights consisted of the tirij and safahwár before mentioned, a kaumwár or caste statement, and an abstract of the khewat showing the tenure of the mahál and the number of owners in each separate property. In completing the record of rights, two courses lay open:—*First*, merely to allow a sufficient time for enquiry and decision of disputes, and then to fair out the records according to the same year as that for which they were attested. *Second*, to keep up notes of all changes occurring in the succeeding year or years, and finally to fair out the record of rights according to the state of things existing in the last year up to which notes of changes were kept up. Mr. Crosthwaite and Mr. Smeaton favoured the latter system, and accordingly in Morádábád, Thakurdwára, and Bilári, whilst the rough records were filled in and attested according to the state of things found existing in 1280-81,* the faired records were according to that in 1282 and 1284 fasli.

5. Whilst admitting that there are some good points in this system, the first being the exceedingly searching test to which the records are subjected, I am on the whole most unwaveringly and strongly *against* it. I am so for the following reasons, any one of which, in my opinion, outweighs all the advantages gained by the system:—

First.—As the assessment work cannot wait for the record work, this system immediately offers the following dilemma:—(a) either the khasra must contradict the jamabandi and very likely the khewat also; (b) or it must contradict all the assessment statistics which are presumed to be founded on it.

Second.—In practice the effect of this system is to ruin the patwáris' real work for the years between fairing and attestation, i.e., the preparation of their haftgána in their circles.

Third.—It is extremely difficult, almost impossible, to prevent the attested papers getting very much cut up and so altered as to be almost illegible in some places.

Fourth.—The expense is increased in a much higher ratio than the work is improved.

(*First*).—I have been more and more struck every year of my settlement work (and as I have had to attest two whole tahsils and part of another *myself* without a Deputy to do it for me, I may claim to speak from experience) with the advantages of having *all* the papers in both the bound volumes made over to the Collector's office,

* Except in the alluvial maháls of Thakurdwára lying along the Rámanga, which were surveyed and re-attested in 1283 fasli, the Morádábád khánapuri was for 1280, and that of the other two parganas for 1281; the fairing was similarly for 1282 in the former and 1284 in the latter.

as well as the statistics in the English No. II. statements made out for the same year. I have known a settlement jamabandi prepared with the greatest care set aside as *worthless* because it did not agree with the khasra, and though it might have occurred to the court doing so to enquire further and find out that they were for different years, yet the less chance given for such mistakes the better. Further, it really does increase the chance of error for one of the checks on fairing, which is the absolute agreement of the entries regarding proprietorship and cultivation between the khasra and jamabandi faired out by different muharrihs, is thus lost.

(*Second*).—The effect on the patwáris' work was first brought out forcibly to my notice at the end of 1285 fasli. After Mr. Smeaton had gone home, and when I came to know something about the system of work followed here, I found that owing to the way the patwáris were perpetually being summoned by girdawárs and munsarims and called in by the Deputy Collectors, *their real work*, the preparation of the haftgána for 1285 fasli in Bilári, Sambhal, and Aniroha, had hardly been touched. The patwári is an animal of such a nature that he seems to enjoy perpetually absenting himself just when wanted, and he considers the fact of his attendance having been required in one place, like the Deputy Collector's Court, as a full and sufficient excuse for not doing his work at any other place, even when flatly disobeying the Deputy Collector's summons also. It is also a failing to which Deputy Collectors are prone to call in half the patwáris of a pargana at once and keep them waiting for several days in order to have each man ready when his turn comes for the requisite enquiry. It was with great trouble and difficulty that the 1285 fasli work was got done at all, and I have since forbidden any patwáris being summoned except in actual cases, and then only for the day. I am certain it is absolutely necessary to keep to this rule to give the haftgána any fair chance at all.

(*Third*).—The necessity of revising a very large number of the Morádábád records is an example of what I mean. In that instance the injury which I describe as likely was rendered inevitable by the want of proper supervision over the sadr munsarim who had charge of the rough papers. He began to make alterations which he thought sounded better than the original in the wajibularz, and he seems to have gone on making all kinds of alterations of his own free will in the whole records. This was of course an extreme case, rendered impossible by the system Mr. Smeaton afterwards introduced, but even under this, the number of alterations really *bonâ fide* necessary in order to keep the records up to date, cut up the papers so much that it is sometimes hard to make out what they are intended to show, and this must open a door to fraud.

The kistwar maps too, quite apart from all question of fraud, sometimes get so scored over in the course of two or three years' successive partál as to be quite disfigured, and it is next to impossible, taking one up, to say which are the tukras made at the first, second, and third partál respectively. I have alluded to this in the previous chapter, and I now take up the subject again. I am quite certain that the proper way is to have a map showing the state of things for one year only, and that year should be the year of attestation.

6. The outcome of the experience gathered in the course of settlement may be summed up in the procedure followed in Hasanpur. Attestation having been for 1285 fasli, all the papers were prepared for that year.*

The survey having taken place two years before, the survey map was out of date, and I therefore got Major Barron to prepare me a copy with all changes brought up to date in 1285, so that the jamabandi, khasra, and map all agree exactly.

Copy of the attested khafiauni was given to the patwáris on the spot directly after attestation; they were not allowed to come loitering about the sadr office, but

* Except in a few alluvial maháls in which all papers are for 1286 fasli.

were made to give lists of any errors found to the girdawars, who were superintending the preparation of the haftgána for 1286 fasli (according to the new system), and who saw them almost daily in their circles. Compared to the enormous lists of changes which the patwáris used to bring or send in other parganas, the list of *badra* or actual errors furnished through the girdawars in Hassanpur were microscopic and were disposed of with hardly any injury whatever to the patwáfi's current work. Finally, to ensure the records from unauthorised alteration, two lists—one called the *fard tarmim*, the other *fard mukadamát*—were attached to the khatáuni. On the first, all changes ordered at time of attestation without separate cases being instituted, and on the latter all changes made by subsequent orders in cases, were recorded, both under signature of the attesting officer. To carry out the necessary alterations four special munsarims were picked, a certain circle was given to each, and he was the only man allowed to make any alteration whatever, his signature being taken to each alteration, and he being of course responsible that it was strictly in accordance with the order on the list under the Deputy Collector's signature.

With fair supervision fraudulent alteration of the rough papers is under this system almost impossible.

7. In fairing, the main point to insist on is ample supervision and scrutiny. This both Mr. Crosthwaite and Mr. Smeaton fully recognised, and the faired papers have all through been subjected to three testings. First comes the 'jáneh ibtidái,' which consists in every single word copied being compared with the rough by a separate establishment of muharrirs, who get from Rs. 12 to 15 a month as wages. Any errors then found are at once sent to the munsarim in charge of the fairing department, who has them corrected, and then the volume goes on to the second stage, called 'jáneh afsari,' where it is subjected to a very close scrutiny by picked muharrirs and naib-munsarims; it then goes to the third stage, called 'jáneh hákimi,' that is, to the Deputy Collector himself, who, with the aid of four munsarims specially chosen, tests it in a variety of different ways sufficiently to make certain it is very nearly absolutely correct. If it passes this enquiry, it is considered fit for lodging, and is sent up to the settlement officer. Both Mr. Smeaton and myself frequently tested the records thus sent us by going over them in the villages, and, as far as I could see, if not absolutely correct, they were very nearly so. When I did find errors, which was very rarely, they were almost always of two kinds—either the non-entry of some of the sharers in the tenant right, or the confusion of one field for another. These of course had continued all through from the very beginning. I hardly ever found any errors made in the fairing except occasionally in names, such as Plagna for Bhagna, which were of little consequence.

8. Altogether the preparation of the record of rights is by far the heaviest work in settlement. Assessment requires more experience and judgment, but for continuous wearing toil it does not come near the other. And the question must be asked—Do the results repay all this? It is of course absolutely necessary that the proprietary rights should be clearly defined in order to distribute the revenue, and it is also necessary to have some fairly corrected record of occupancy and tenant right. With the patwáris' papers in the state they were in most of the circles of this district a complete revision with all its labour and expense may be pronounced to have been really necessary, but I most entirely agree with Mr. Buck in holding that this ought never to be the case again. Further, even if it should prove impossible in practice to accept the patwáris' papers as sufficiently accurate for assessment purposes, I should certainly advocate devoting time and money to thoroughly revising and improving them, and not to making out a separate and independent record of rights. Changes are so constant and rapid that such a record very quickly gets out of date, whilst, on the other hand, its existence and its very accuracy when first made have an unfortunate tendency to prevent these changes being promptly and efficiently recognised and carried into

effect in the papers of succeeding years, so that there is a danger of finding the records out of date again at the next settlement. If, therefore, I were beginning instead of closing a settlement, I should be strongly inclined to recommend having no record of rights in its present acceptation, but to have the patwáris' records put under the settlement officer at least three years before he was expected to assess, and to make him responsible for working them up to a sufficiently accurate condition to assess on. After such a course of training, the patwáris would be far more likely to go on keeping up fairly accurate records than they are under the system by which the record of rights is prepared almost altogether independently of them, and in which they are found so utterly useless, that when the revision is done, hardly any of them can even be trusted to make their own copies of the records, but have to pay for its being done by trained muharrihs.