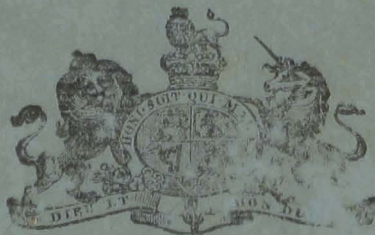


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REPORT
ON THE
TENTH SETTLEMENT
OF THE
GARHWAL DISTRICT.

BY E. K. PAUW, C.S.,
In charge of the Settlement.



ALLAHABAD:
Printed at the North-Western Provinces and Oudh Government Press.
1896.

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From—S. H. BUTLER, ESQ., *Offg. Joint Secretary to the Board of Revenue,
N.-W. Provinces and Oudh,*

To—*Chief Secretary to Government, N.-W. Provinces and Oudh.*

SIR,—I am directed to forward the final report on the Garhwál settle-
ment, with the Commissioner's review thereon. The Board
Present : are not disposed in this case to take exception to the length of
the report, for Garhwál is to a large extent "*terra incognita*,"
and no one is so competent to explain its tenures and economic conditions as the Set-
tlement Officer. In addition, the report is very well composed and is calculated to
add materially to the knowledge of future Deputy Commissioners regarding the dis-
trict. It is not, however, necessary for the Board to follow Mr. Pauw in descriptive
matter or discussions as to tenures and economic conditions.

2. The pith of the report is found in paragraph 102 :—"But the actual amount
of the assessments rested ultimately on the fact that it had been determined on gen-
eral grounds that at the present revision of settlement the land revenue of the whole
district was to be raised about fifty per cent. As stated by the Commissioner, Mr.
Roberts, in his review of the Barahsyun assessments, this is an empirical and not a
statistical determination and arises from the necessity of the case. There is no
rent as distinguished from revenue, and therefore the method of assessment on the
rental assets cannot be employed. There is no possibility of accurately, or, I ven-
ture to say, even approximately, calculating the gross produce of the soil, and if it
could be calculated, there is no canon to guide the assessing officer in determining
for a given village what proportion of the gross produce should be taken as land
revenue. It may be added it is not uncommon for the inhabitants (all agricul-
turists) of whole *pattis* to consume as food the whole gross produce of their land.
Garhwál as a whole does not produce sufficient to feed its inhabitants, as the small
exports to Tibet are far more than balanced by enormous imports from the plains.
And such trades and manufactures as exist are insignificant. Taken on the whole, it is
not too much to say that the agricultural classes of Garhwál consume the whole pro-
duce of the fields. The revenue is paid out of their miscellaneous earnings. This
being so, a settlement is in no sense an assessment of land revenue as the term is
understood in the plains. All that can be attempted is the assessment of a fairly
equitable quit rent. And this is justly taken in proportion to the quantity and
quality of the land each man holds; and not on the miscellaneous earnings (though
these really pay the revenue), as would be the case with a poll tax; because the
man who holds land, the produce of which is more than sufficient to feed his family,
is in a position of such enormous advantage over the man whose land is insufficient to
feed his family, and who has to purchase out of his miscellaneous earnings at very
high prices the provisions necessary to sustain their lives. But the amount of
land revenue which can be assessed on the district as a whole is at present largely
independent of its agriculture. Remove the miscellaneous sources of income, or
even the principal ones, that is to say, forbid the Badrinath pilgrimage, stop all
public works and operations in reserved forests within the district, remove the
Lansdowne cantonment, and interdict the employment of Garhwális outside Garh-
wál, and the amount of land revenue that could be collected from the district would
be very small indeed. On the other hand, as the amount of these earnings increases
the land revenue may be increased with them. But it is hardly possible that, with
its increasing population, Garhwál will ever again be able to pay its land revenue
out of the produce of its fields."

Every attempt has been made to arrive at a fair estimate of revenue-paying
capacity, but the settlement has remained empirical. This was unavoidable, and it
renders discussion of predetermined results unprofitable.

3. The actual enhancement of revenue has been Rs. 51,523. To secure this an expenditure of close on 5½ lakhs has been incurred (Appendix XIV), exclusive of the pay of a Settlement Officer, which is one of the largest items of expenditure in a settlement in the plains. The survey started with a disturbance of a serious character (paragraph 82). The preparation of a record of rights involved 25,117 regular suits, 17,454 of which related to proprietary and 4,192 to cultivating right, and 1,383 to boundaries (page 120). Writing in September 1890, Sir Henry Ramsay observed: "what these rules require would disgust the country: they are too complicated for a semi-barbarous people as you will find in the greater part of Garhwál. And *cui bono*? A pretty picture, elaborate expensive statistics, which will create great discontent and litigation. In my opinion a 'pargana rate' is an absurdity in the hills, and a 'classification of soils' an impossibility." It is easy to be wise after the event, but it is, in the opinion of the Junior Member, an obvious remark that the opinion of Sir Henry Ramsay did not perhaps receive the full attention which it deserved. No one before or since has known Garhwál so well as Sir Henry Ramsay knew it.

4. The portion of the report which, in the Junior Member's opinion, contains the most interesting and profitable information is that dealing with the assessment of the tract, which escaped cadastral survey (paragraphs 108—112 and the latter part of paragraph 126). The Commissioner draws attention to the difficulties encountered, but it would appear that the results secured were not inferior to those obtained under the more elaborate and costly procedure. The Board are constrained to notice that some of these difficulties might have easily been avoided. The difficulty of distribution, for instance, would probably have been removed if from the outset the Settlement Officer had attempted to settle it at once in conference with the people. The

G. O., No. $\frac{2381}{1-556A}$, dated 31st August 1894, distinctly contemplated "guidance" by the Settlement Officer. It was unreasonable to expect the people to distribute the revenue themselves without guidance. If in this as in other matters connected with the actual work in Garhwál practical considerations had been given full play, and theoretical methods placed on one side, the Board are confident that the difficulties would have been less. But the conclusive argument in favour of this system is the cost. The cost of the two systems (Appendix XIV) compares as follows:—

						Rs.
Cadastrally surveyed	...	...	...	...	...	5,30,448
Non-cadastrally surveyed	...	...	...	...	...	3,373

Even the summary system appears to have been unnecessarily elaborate and to have aimed too high. The Government order quoted above distinctly laid down "that a survey even of the new cultivation of this portion of the district is only justifiable if absolutely necessary, and that it is not necessary." But the Deputy Collectors, who appear to have misinterpreted these instructions, entered upon an unauthorized survey of such a character that it was "bound to be less accurate as regards the total cultivation than an intelligent estimate would be." But whatever the difficulties involved may be, experience shows that they can be overcome in the end, and it is reasonable to expect that they can be avoided to a large extent by foresight in the beginning. And the Junior Member has no doubt that, in view of the results to be obtained and the cost involved, the summary method of assessment will in future alone be justifiable.

5. The lessons, then, to be learned from the Garhwál settlement are, in the opinion of the Junior Member, the following:—

- (a) It is a mistake to enter upon any costly procedure when leniency in assessment is imperative, the absolute enhancement small, and an inductive valuation impossible.

- (b) It is desirable not to fix in advance the enhancement to be taken for a whole district. The better procedure will be for the enhancement of each pargana to be separately sanctioned, on the report of the Settlement Officer after inspection.
- (c) It is unprofitable to prepare records, the need for which is not irresistible and the maintenance of which will be difficult.
- (d) The less the people are disturbed the better.
- (e) The Settlement Officer should do all the work himself in direct communication with the people. Many of the difficulties in Garhwál appear to have arisen out of the preparatory action of subordinates.

And in the settlement of the Almora district the Board propose to introduce for a practical trial a system of settlement on the above lines.

6. It remains to discuss the period for which the settlement now reported should be confirmed. In their letter No. 431, dated 1st March 1892, the Government suggested that the settlement should be made for a period of twenty years. In G. O. No. $\frac{1788}{1-556A}$, dated 13th July 1892, the Board were directed to consider the question in the light of the settlement report and its statistics. In their review of the Barahsyun assessments the Board directed that engagements should be taken for twenty years "subject to such orders as Government may eventually be pleased to pass regarding the term of settlement for Garhwál." The Board consider that twenty years is a minimum period for a settlement, and they would strongly recommend that the settlement be confirmed for a period of thirty years. There seems reason to believe that the enhancement taken is fully as much as the district can pay. It is double the amount of the largest sum which Sir Henry Ramsay thought could safely be taken. Comparisons of its incidence on the cultivated area now and at the last settlement are of little value, because the cultivated area at last settlement was not accurately ascertained (paragraph 114). Nor is it any practical test to reduce the revenue, which is assessed chiefly on miscellaneous earnings, to a percentage of an estimated produce. The enhancement taken is considerable, the re-survey and the preparation of records and the great consequent litigation must have involved a large unrecognised expense on the people. The financial interest involved is small, and the Board consider that the district requires rest for another generation. But while the Board would recommend that the settlement be eventually confirmed for thirty years, I am to point out that final orders to that effect cannot yet be passed. The *Nali bania* question to which the Commissioner refers in paragraph 8 of his review led to orders that fresh engagements should be taken from the *zamindárs*. Until the Deputy Commissioner reports that these fresh engagements have been taken the settlement cannot finally be confirmed. And the Board are submitting their review in anticipation of the Deputy Commissioner's report only because their proposals for the revision of the Almora settlement are based on the experience derived from the Garhwál settlement, and can be best explained and justified by bringing the report on that settlement and the lessons it conveys to the knowledge of Government.

7. In conclusion, I am to bring to the notice of Government the industry and ability displayed by Mr. Pauw, under great pressure in the course of his work, of which his excellent report is a suitable expression.

No. $\frac{3655}{1-1}$ OF 1898.

FROM

LIEUTENANT-COLONEL E. E. GRIGG,
COMMISSIONER, KUMAUN DIVISION,

TO

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

Dated the 26th February 1898.

SIR,

I HAVE the honor to submit my review of the Settlement Officer's report of the Garhwál District. I beg to apologise for the delay in submitting it. But owing to crush of other work it has not been found possible, until within the past few days, to comply with the Board's orders.

I have the honor to be,

SIR,

Your most obedient servant,

E. E. GRIGG,

Commissioner.

REVIEW ON THE SETTLEMENT REPORT OF THE GARHWÁL DISTRICT.

MR. PAUW'S settlement report whether regarded from its purely literary aspect, or as compendium of all that is necessary to form an opinion of the propriety of his assessment, is a most valuable contribution. The opening chapter deals with the economic condition of Garhwál, its material progress since its occupation by the British in 1815, the physical features of the country, people, caste distribution method of cultivation, &c., &c., and is full of interest. In the settlement report of 1864 Mr. Beckett considered it unnecessary to touch upon any of the above subjects, inasmuch as they had, in his estimation, been fully dealt with by both Messrs. Traill and Batten. But as the first-named officer's statistical sketches were issued in 1823 and 1825, and the latter's report in 1842, or more than half a century back, it was distinctly desirable to be put in possession of the state of things as they now exist: and as regards historical and other matters of interest, to have them incorporated in one volume, instead of as at present in two or three. Moreover the earliest reports are not always accessible. For even Mr. Batten had to refer to Volume XVI of the Asiatic Researches for a copy of Mr. Traill's reports of 1821 and 1825.

It is very evident that Mr. Pauw has made good use of his opportunities during the short time he has been in Garhwál, and has collected a mass of information which should prove most useful to the Settlement Officer of the future, as also to all officers charged with the administration of this district.

2. With regard to the approximate output and value of the principal crops given in paragraph 24, it has to be remarked that so much depends on the seasons and the prices prevailing that the figures furnished for some of the crops are at any rate subject to considerable variations: *e.g.*, in 1886 pepper was selling as low as Rs. 6 per maund, and this is one of the most paying crops raised.

3. In his paragraph 25 dealing with cattle, it may be observed that the enormous forest at Dudatoli (from a recent return) is found to afford grazing for over 20,000 head of cattle. It is to this splendid pasture ground and the forest to south-west of Kanyúr that the people of the neighbouring patts of the Almora district take their cattle; and it is probably owing to the above and the fact that there are large areas of reserved forests bordering the hills, in which rights have been granted, that, as remarked by Mr. Batten in footnote to paragraph 16 of his report of 1842, "the Garhwáls do not migrate annually to the Tarái to graze their cattle, their own hills affording sufficient pasture."

4. In his paragraphs 27, 75 and 102 the Settlement Officer discusses how far the material prosperity of Garhwál is dependent on the pilgrim traffic. With a population which in the past has increased by leaps and bounds (*i.e.*, if the census returns are at all reliable) and for which the area under cultivation produces in an ordinary season only sufficient for its consumption; it is evident that deprived of the five lakhs which these pilgrims yearly bring into the district, the adult male population would have to migrate to a much greater extent, than it does at present, for the means of livelihood. Roughly speaking some eight or ten lakhs are earned yearly from the above, as also from those other sources which have been enumerated by Mr. Pauw; and it is these extraneous means of subsistence which have so altered the condition of the people in the southern and south-eastern parganas and also those which adjoin the pilgrim route, as evinced by the construction of more substantial houses in these parts of Garhwál, as also by the improved style of living.

5. Chapter II dealing with tenures is distinctly valuable. There is no rent law, properly speaking, for Kumaun. All that at present exists is contained in the few rules which have been excerpted from Act XXII of 1868 (the repealed Oudh

Rent Act) and form the Kumaun Rules. These do not define the terms "sajhi," "sirtan," "khaikar," "hissedar," "padhan," or "thokdar." The result is there are, as explained in this chapter, a variety of rulings on the status or rights of tenants-at-will (sirtans) and occupancy tenants (khaikars). With the increasing population and scarcity of land suitable for agricultural purposes, there is a strong tendency on the part of the proprietary body to get rid of the occupancy holders; and either to convert their khaikari lands into "kbud" (proprietor's *sir*) or to bring it under their own immediate control. It is therefore essentially necessary that the rulings of those officers, like Mr Traill and Sir Henry Ramsay, who between them passed some sixty years in, and who have made, Kumaun what it is, should be placed on record in this report. The existence of these rulings is only occasionally brought to light by their production in support of some claim, and the Settlement Officer has supplied a real want by giving short abstracts of the most important bearing on the question of tenures in Garhwál. Mr. Reid, the latest authority on the subject, has likened the khaikars to the occupancy holders of the North-Western Provinces. It is however evident from Mr. Traill's earliest report that with few exceptions (where the khaikar in a proprietary village, or, more correctly speaking, in a village in which the proprietary body occupy land, has purchased their right), he is a descendant of the former occupant proprietor, or grantee who under native rule lapsed into this subordinate position on a change of grantees. He therefore, in my opinion, corresponds with the right of occupancy-holder, as also in many respects, to the under-proprietor of Oudh and not to the North-Western Provinces *maurusi* tenant; and it is for this reason that I consider that the existing rule, whereby separately recorded holdings in default of direct heirs lapse to the proprietors, is inequitable, and that it should be subject to the law of inheritance, as in the case of Oudh men. Several cases of this description have come before me, which owing to the want of any law on the subject and the divergent views which have been held with regard to these sub-proprietary holdings I have experienced considerable difficulty in dealing with.

6. Regarding the right of the tenant-at-will (sirtan) to claim compensation for improvements there have been a variety of rulings as pointed out by the Settlement Officer. There is moreover no law which necessitates the issue of a notice prior to evicting this tenant.

7. The question of extension of cultivation has recently been decided on broad lines. Zones will be demarcated within which such extension can be made without any restriction on the part of the revenue authorities. It is only where forest is impinged on, that applications for a *nayabad* grant will be necessary.

8. As regards the Náli Bania, an institution without which it would be extremely difficult for officials to move about the district, the orders of the Government of India are awaited.

9. In discussing the thokdárs, paragraph 56, the Settlement Officer shows that this title and office was on the point of being abolished in 1856; and there is no doubt that in giving effect to the opinion of Sir Henry (then Captain) Ramsay and other officers a very considerable reduction was made in this body, who under former settlements had been entrusted with certain police powers, as also with the supervision in criminal matters over padhans. In 1874, however, Sir Henry changed his opinion, since when, with one or two exceptions of recent date, no reductions have been made. Mr. Pauw regards the thokdárs as the survivors of past greatness, and as giving a tone to native society. My own somewhat limited experience has convinced me that these magnates are far more ornamental than useful, and in dealing with crime often worse than useless. In not a few instances have thokdárs been found conniving at concealment of murders and other crimes for which they have been deposed from office, and the title conferred on some one of another clan or family. But with greater personal supervision resulting from officers being now constantly on the move in the interior of their districts, the power for evil which these

men have welded in the past, is, by degrees, being minimised. At the same time it is essentially necessary that their proceedings should at all times be carefully watched.

10. The fiscal history of Garhwál is summarised in Chapter III, which gives a resumé of the revenue administration of the district from the earliest times. It appears that prior to the Gurkha assumption, the revenue of Garhwál from all sources amounted to Rs. 1,50,000. But under the Gurkha administration, which was marked by the grossest oppression, and would, but for the interposition of the Government of Kathmandu, have resulted in the depopulation of the country, the revenue from all sources had fallen to nominally Rs. 1,04,551; and in the last year of the Gurkha rule the receipts were less than one-half, *i.e.* Rs. 37,706, out of a demand of Rs. 91,258. For the first year, 1815, of the British occupation each pargana was leased separately, and in 1816 the revenue demand stood at Rs. 35,990-0-3. For the years 1815-1818 the leases were renewed yearly and during this period the revenue rose to Rs. 45,548. In the latter year three years' leases were granted, which were renewed for a further period of three years, in 1820, and then the settlements were extended for five years, 1823-24, 1828-29 and finally to 1833-34; by which year the revenue had risen to Rs. 69,254 *i.e.* it had been all but doubled during some 18 or 19 years. The last figure was maintained till 1840 when Mr. Batten made his 20 years' settlement fixing the jama at Rs. 68,682; the Board of Revenue being of opinion that the time had arrived to put a stop to short settlements, as also to constant enhancements. With some slight modifications, due to *nayabad* leases, this demand was maintained till 1864, when the first field survey was carried out by Mr. Beckett, who raised the demand to Rs. 96,311, or including

					Rs.
Gunth—Revenue	...	...	...	...	7,139
Sadabart	...	...	...	...	3,626
Muafi	...	...	...	...	263

to a total of Rs. 1,07,339. The actual demand at the close of the last settlement stood at—

					Rs.	a.	p.
Khalsa	...	...	...	...	96,721	14	1
Gunth	...	...	...	...	7,711	10	6
Sadabart	...	...	...	...	3,649	0	0
Muafi	...	...	...	...	148	6	4
Fee-simple	...	...	...	...	778	8	0
			Total	...	1,09,009	6	11

By the settlement which has just been concluded, but in respect to which the full demand will not come into force till 1902-1903, it will be for—

					Rs.	a.	p.
Khalsa	...	...	...	...	1,48,245	2	11
Gunth	...	...	...	...	10,651	14	1
Sadabart	...	...	...	...	5,267	0	0
Muafi	...	...	...	...	531	15	0
Fee-simple	...	...	...	...	1,031	8	0
			Total	...	1,65,727	8	0

This increment is nominally spread over a period of 10 years; but the initial revenue for the first three years, ending 1896-97, will be Rs. 1,63,582-8-0 for khalsa only. In the next three years it rises to Rs. 1,65,275-8-0, and in 1902-03 to Rs. 1,65,727-8-0, a total increase of 53.27 per cent. on the khalsa. Thus exceeding by 3.27 the enhancement which had been decided upon prior to commencement of settlement operations. This enhancement was, apparently, determined upon after several experimental surveys, in order to ascertain the extension of cultivation, had been made.

11. Owing to the land being almost entirely in the hands of peasant proprietors, and to the total absence of any recorded rent, it was considered desirable by the

Government of India to include in the assessment statement a return giving the estimated value of the gross produce. The percentage the revenue bears to this, for the entire district, amounts to only 3·81.

12. When submitting the Settlement Officer's assessment reports of the several parganas, his proposals have been fully discussed. It will therefore be sufficient to say that the revised assessment has been carried out with due regard to the instructions which were issued by the Board for the guidance of the Settlement Officer. By personal inspection I have satisfied myself that the revenue has been judiciously distributed, also that in no instance can it be said to press heavily on the payers. It is as a matter of fact extremely light, being for the whole district at the rate of 8 annas per acre on the assessable, *i.e.* cultivated area, against 14 annas at the last revision of settlement. The latter figure is based on the area returned by Mr. Beckett. But that officer excluded "khil," or casual cultivation, altogether, and as this has been measured in the present returns, it is impossible, as is explained by Mr. Pauw, in his 127th paragraph, to determine what is the actual increase in cultivation since the last settlement.

13. When inspecting Chaundkot I made a number of most careful measurements; selecting for this purpose fields which, apparently, had not been subject to any alterations since the previous survey, with the object of ascertaining how far Mr. Beckett's survey was to be relied upon. The result was to find that in some instances it was remarkably accurate. In the outlying cultivation the case was no doubt different; for there the boundaries would be subject to alterations. Taking these altered circumstances into consideration, I think it but just to Mr. Beckett to say that Colonel Erskine's remark that Mr. Beckett's measurement was a "miserably inaccurate and incomplete 'Nazri' survey" is not strictly correct. Colonel Erskine did not, I believe, ever personally test Mr. Beckett's survey, and it would therefore appear that his opinion is founded on imperfect information. But leaving the accuracy or otherwise of Mr. Beckett's survey out of the question, it is evident, from the fact that the late survey included "katil," whilst the former excluded it, and as the area of katil, notably in Ganga Salan, is very extensive, and in some other parganas by no means inconsiderable, it is not possible to state with any degree of accuracy what is the actual difference in the assessment per acre of the present, as compared with that of the preceding settlement. But taking everything into consideration, I am inclined to think that the rate per acre of the assessment is considerably lighter than that imposed by Mr. Beckett at the last revision of settlement.

14. The revision of the settlement in the non-cadastrally surveyed parganas of Painkhanda and Dassauli, as also in eight patts of Badhan and Nagpur is described in paragraphs 108—119. The difficulties encountered in carrying out this measure are by no means overstated. It was believed that once the revenue to be assessed had been decided upon, its distribution by the village "*panch*" would be a comparatively easy undertaking. This, however, was far from being the case. In the first place Malla Painkhanda was not surveyed at the last settlement, and it was by no means an easy matter to arrive at a fair approximate of the increase in cultivation. But when this had been ascertained by personal inspection and the Settlement Officer had fixed his demand, his real difficulties began. For, he found the malguzars, except in a few cases, where the distribution was made by the patwaris, were unable to apportion it among the hissedars. Consequently the Settlement Officer himself had to distribute the demand, but in doing this he was careful to consult those who were most interested in its equitable distribution.

15. In dealing with the Bhotia mahals, Mr. Pauw was, to a great extent, guided by the system adopted by Mr. Traill in his assessment of these mahals. He wisely refrained from resorting to any form of tax on trade, which under the Gurkha Government had proved so oppressive as to almost ruin the traders and led to their migration across the border, and decided to base his assessment on produce of agriculture

and ditto of jungles. The former was obtained by applying rough revenue rates to the estimated cultivated area of the village, whilst the latter took the form "of consolidated grazing dues on the excess cattle in any village," over the number necessary for cultivation, and the results, as will appear from a reference to the assessment statement, have worked out most satisfactorily.

16. As regards three of the five villages of the Bhábar tract, *viz.*, Mawakot, Bhalbhadrapur and Dharon, it may be said the assessment was for the most part based on ascertainable rent, the Government demand being, roughly speaking, fixed at 50 per cent. of the assumed or ascertained assets.

17. The actual time occupied in the settlement operations from first to last was a little over six years, it having practically commenced in 1890. The previous settlement made by Mr. Beckett, which commenced in 1856, and was interrupted for 18 months by the mutiny of 1857, was completed in 1860-61, but the report was not submitted till 1864.

Mr. Partridge began his inspection of patti Barahsyun at the end of 1892, and completed it in May 1893, when he took up Chaundkot, which was completed in January 1894. He then commenced that of pargana Malla Salan, and had completed seven patts of it by March of that year when the anticipated Gauna flood compelled him to stop work. In July he proceeded on three months' privilege leave, and shortly after his return in October, he was transferred from Garhwál and Mr. Pauw was appointed as Settlement Officer in his place. This officer completed the inspection of the remaining three patts of Malla Salan in three weeks.

At the rate the settlement operations were being carried out by Mr. Partridge, it was evident that the revision of assessment would be spread over several years, and as the cost of the settlement was already out of all proportion to the anticipated rise in revenue, on my conclusion of the inspection of Chaundkot in June 1894, I submitted certain suggestions with a view to accelerate its completion. These were approved of by the Board, and it was decided that the settlement operations must be concluded within one year. The task set for Mr. Pauw to perform was, I am free to admit, a severe test to any one, however active and however robust, but it was cheerfully undertaken, and by November 1895 he had completed and despatched his assessment reports of the hill patts of Garhwál, those for the five villages of the Bhábar being submitted in December of that year.

18. The method of inspection adopted by Mr. Pauw has been fully explained by him. It was thorough. His assessments were not dependent upon the opinion of thokdars and others, who would appear to have guided Mr. Partridge to a certain extent in framing his.

19. Out of 5,213 mahals, the revenue was revised in 3,752 by Mr. Pauw, from which a fair idea can be formed of the magnitude of the work which has been completed by this officer in a little over a year. The number of assessment circles formed by Mr. Partridge in Barahsyun was 37, in Chaundkot 25 and in the seven patts of Malla Salan 10. When reporting on Chaundkot, the propriety of the very minute system of assessment circles adopted by Mr. Partridge was commented on. The Board too being of opinion they were unnecessary, the number was reduced to more than one-half in the case of Malla Salan, and these Mr. Pauw still further reduced to "superior," "average," and "inferior." But although he made these his standard, yet as the necessity arose he increased or decreased them, but always for a specific reason.

20. The cost of revising the recent demand for Garhwál has been prodigious, amounting to not far short of 5½ lakhs; or if the cost of the Settlement Office building now converted into Land Record Office is excluded, close upon Rs. 5,34,000 as compared with Rs. 75,000, the estimated cost of Mr. Beckett's settlement. The annual gain to Government from khalsa villages is placed at annually Rs. 51,523, or some 10 lakhs for the 20 years, the period for which the new settlement has been fixed. The additional amount which will be obtained from cesses cannot be taken

into account inasmuch as the revised settlement operations have necessitated a considerable increase in the number of patwáris and kanúngos whose salaries will probably absorb this slight increment. At the moderate rate of 4 per cent. on the capital outlay, it would appear that the actual gain to the Government is infinitesimal. On the other hand, and apart from the financial aspect, the settlement operations have resulted in the compilation of a most useful set of returns, and the completion of a scientific survey of a great portion of the cultivated area of Garhwál.

21. The dates from which the revision of assessment has been provisionally sanctioned are given in paragraph 128 of the report. All that remains now is for the Government of India to confirm the same for a period of 20 years.

22. Mr. Pauw has in his concluding paragraph drawn attention to the work done by Pandit Dharma Nand Joshi, Settlement Deputy Collector, a distinctly able and clever officer.

Mr. Freeman, on whom devolved the supervision and carrying out of the major portion of the survey operations, is justly commended for the excellent work he has turned out.

In conclusion, I trust the Government will see its way to accord its approbation of the exceedingly able manner in which this young officer, Mr. Pauw, has carried out the revision of the Settlement of Garhwál.

E. E. GRIGG,

Commissioner, Kumaun Division.

The 25th February 1898.

PREFATORY NOTE.

THE accompanying report has been made as short as possible, and all matters dealt with in the Gazetteer have been intentionally omitted. Such are language, history, flora and fauna, religion, manuers and customs. The general description of rivers and mountains, climate and vegetation contained in the first chapter is only such as is necessary to a proper understanding of the conditions affecting the settlement. The people, their present condition, methods of cultivation and sources of income have been dealt with in more detail as they are intimately connected with settlement and particularly with the settlement of Garhwál. The connection of the remaining chapters with the assessment of the land revenue is self-evident, but throughout conciseness has been carefully kept in view and all non-essential matter rigidly excluded. It is regretted that the report is somewhat longer than is usual in similar compilations, but this is due to the nature of the case.

The statistics of the present settlement have in every case been corrected up to the 31st July 1896, and the incidences and rates calculated on the figures as they then stood. Some slight alterations in area have been subsequently notified by the Survey office and the revenue shown in the statements has been further reduced by Rs. 4 owing to these alterations and by Rs. 11 on appeal. Expenditure incurred since the end of August to bring operations to a close has amounted to Rs. 125-12-0 on the survey and Rs. 667-8-4 on the settlement in addition to the amounts shown in the report. This includes all expenditure except that connected with the printing and distribution of cadastral maps.

PAURI :
December 22nd, 1896. }

E. K. PAUW.

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ERRATA.

Report on the tenth settlement of the Garhwál District.

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72	37	Ukkimath	Ukkimath
74	43	rule	rule
77	32	Ramangar	Raunnagar
79	51	1863	1893
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89	8	South Udepur and Chaurgaddi circle.	South Udepur circle
"	9	North Udepur circle	North Udepur and Chaurgaddi circle
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"	27 (col. 15).	3	...	3
5A	20 (col. 23).	0-11-1	...	0-11-4
7A	18 (col. 22).	50,806-9	...	50,806-1
15A	7 (col. 22).	23,685-3	...	33,685-3
17A	11 (col. 18).	3, 74-1	...	3,174-1
28A	3 (col. 17).	24,288	...	24,288-4
29A	2 (col. 15).	5,91-2	...	5,916-2
51A	Last line (col. 13).	32	...	632
55A	24 (col. 13).	17,873 2	...	17,873-9-2
81A	15 (col. 9).	2	...	0-6-3
"	16 (do).	...	...	0-5-7
"	17 (do).	2-2	...	0-12-2
"	18 (do).	0-5	...	1-0-5
95A	Last line (col. 21).	7-83	...	78

SETTLEMENT REPORT.

CHAPTER I.

GENERAL DESCRIPTION.

1. The District of Garhwál lies between north latitude $29^{\circ} 26' 10''$ and $31^{\circ} 5' 0''$ and east longitude $78^{\circ} 12' 0''$ and $80^{\circ} 6' 20''$. It is one of the Himalayan districts of the North West Provinces, and the trend of the range in the portion where Garhwál is situated is almost due north-west and south-east. Garhwál lies between the Tibetan watershed on the north-east and the plains on the south-west. The maximum length of the district measured transversely to the direction of the range is 121 miles. Its maximum width measured along the range is 69 miles. The total area of the district is 5,471 square miles. It is bounded on the north-east by that portion of Tibet known as Hundes, from which it is separated by the watershed; and on the south-west by the Bijnor district, from which it is divided by the submontane forest road running from the Sárda river on the Nepál border to the Ganges opposite Hardwár. On the north-west, Garhwál adjoins Dehra Dún district in the extreme south, Hundes on the extreme north, and the protected State of Tehri Garhwál throughout the remaining length. The boundary on the north-west is successively the Ganges and its tributaries the Alaknanda and the Mandágni from Hardwár as far north as Agastmuni, about twelve miles north of Rudraprayág in north latitude $30^{\circ} 23' 10''$, and from the north southwards the boundary is a massive range, of which the Kedarnáth peaks form part, as far south as latitude $30^{\circ} 30'$. Between these two the boundary is an irregular and ill defined line, constituted in many places merely by the recognized boundary between the villages in the pargana of Nágpur, which was assigned to the British when the Tehri State was created in 1815 A. D. and those in the neighbouring *pattis* of the Tehri State. On the south-east, Garhwál adjoins the Kumaun districts of Almora and Naini Tál—the latter only for a short distance near the foot of the hills. The boundary line throughout is extremely irregular, the principle on which it was settled being merely that villages inhabited by Garhwális were assigned to Garhwál and those inhabited by Kumaunis to Kumaun—to such an extent are the two nationalities distinct. In former times when the border land between the two countries was in a continual state of warfare, changes of territory must have been tolerably frequent, but even in later times instances are not wanting of the boundary being changed on the abovementioned principle. For instance, the upper part of the Gumti valley in Katyúr was formerly an integral part of Kumaun, and, to judge by the remains of field terraces, must have been highly cultivated in the times of the Katyúr Rájás. But it fell waste during the last century, and in 1830 A. D. some Garhwális from the village of Dyúrara in Pindarwár crossed the Badhángarhi range and settled in Majkot. The colonization of Raulyán and Chhatyáni soon followed, and thereafter this tract was included in Garhwál. Since, however, Garhwál was constituted a separate district in 1839 A. D. no considerable transfers of area have taken place.

Boundaries and area.

2. Exclusive of the narrow strip of country between the foot of the hills and the submontane road, which is known as the Bhábar, and a few valleys called *Dáns* lying amidst the sandstone formations between the Himalaya proper and the plains, the whole of Garhwál consists of a succession of deep gorges and steep hillsides. The height above sea level varies from 1,000 feet at Lachmanjhúla to 25,660 feet on the top of Nandadevi. In no place is there an unbroken stretch of as much as a square mile of even approximately level land. The ridges of the hills are as a rule so sharp and irregular that a path cannot be taken along them. Here and there the valleys widen out somewhat, and approximately level pieces of as much as one hundred acres are occasionally met with. Such are Srinagar, Kothgi, Nagrású and Panai on the Alaknandá, Jhart in Painon and Kashyáli in Udepur. Small level pieces of land by rivers and streams are comparatively common. The native term for such a piece is *bagar*, hence such names as Narainbagar, Banjbagar. Not infrequently these level pieces of land by

General description of the country.

rivers are ranged in a series of gigantic terraces. At Panai, for instance, the lowest terrace is about fifty feet above the river level, the next is about a hundred feet, while the highest and largest terrace is about three hundred feet above the river. Wherever these level pieces are met with, the soil is mixed with rounded pebbles and boulders, while there is also more or less river sand present—more in the lower terraces, whereas in the upper the sand is less conspicuous. In the Birehi valley, the Gauna flood of 1894 has left beds of rounded pebbles and boulders of exactly the same shape as these level pieces of riverside land. In other places the effect of the flood has been only to spread a layer of sand over the soil. There can be little doubt that the level stretches of land occasionally met with in the hill valleys are the results of similar cataclysms on a larger scale, and that the *débris* of gigantic slips washed down by the succeeding flood has settled into boulder beds, which the weathering of ages has converted into good soil, at first to be covered with sand by each succeeding flood, but afterwards as the river bed was cut lower and lower down, becoming secure from this invasion, the sandy particles meanwhile disappearing under the same influences which have partly converted the boulders into fruitful soil. Looked at from the top of a hill, the various ranges and ridges seem heaped together in indescribable confusion, but by tracing out the course of the rivers on a map the key is obtained to the direction and continuity of the principal ranges. This has been done in the small scale map (No. I) which accompanies this report.

Rivers. The Ganges valley.

3. The greater part of Garhwál is drained by the Ganges and those streams which flow into it within the hills. The area of this basin is about 4,500 square miles, leaving only about 1,000 square miles for all the remaining streams. The term Ganges is properly speaking only applied to the river below Deoprayág, where the Alaknandá and Bhágirathi meet, but the native Garhwáli draws no fine distinction between the Ganges and the Alaknandá. The Alaknandá may be said to be formed by the junction at Bishenprayág near Joshimath of the Vishnugangá (invariably contracted into Bishengangá), which was no doubt so called from the Vaishnava temple of Badrináth past which it flows, and the Dhauligangá, which comes from the Niti Páss. However the name Alaknandá is also applied to the stream which, flowing from the west, joins near Máná village above Badrináth another stream flowing from the north called the Saraswati. The nomenclature of the upper courses of hill rivers is almost invariably somewhat confused. The Bishengangá is formed from a number of glacier streams which pour down from either side of the gorge leading to the Máná Pass. The last considerable stream reaches the main river at Máná village, and thence the united waters flow in a southerly and south-easterly direction to Bishenprayág. The Dhauligangá is similarly formed in the Niti Pass and finds its way to the same spot by a more circuitous route, taking first a southerly, then westerly, and finally north westerly direction. It is joined on its way by two considerable streams on the left bank, the Girthi river which rises in the extreme north of the Almora district and the Rishigangá which takes its origin in the enormous glaciers which lie around the base of Nandadevi. From Bishenprayág the river flows south-west to Pipalkoti (10 miles), the valley being merely a precipitous gorge. Thence to Nandprayág (30 miles) where the Nandákiní is received on the left, the hillsides are not so steep and the valley opens out a little in places. The same general direction of the river is preserved to Karnprayág (40 miles) where the Pindar is received on the left. The river except for a mile or two after leaving Nandprayág and the same before reaching Karnprayág passes through fairly open country and the level pieces by the river present a number of fine villages. From Karnprayág the river flows west with a slight northward tendency to Rudraprayág (69 miles). The gorge continues for a couple of miles below Karnprayág and thence there is generally speaking fairly open country till close to Rudraprayág. Here the Mandágni is received on the right. Thence the general course is westward with a slight trend to the south, till the western extremity of Ráwatsyún patti is reached (86 miles), the country being generally fairly open but with steep hillsides in places particularly between Gulabrai and Dugripant. From Ráwatsyún the river runs south-west to Deoprayág (98 miles) where the Bhágirathi from Tehri Garhwál meets it on the right, thence south to Byásghát (107 miles) where the Nayár is received on the left, thence west with a slight northerly

trend to Lachmanjhúla (134 miles) receiving at Phulári the Hyúnl river. Between Ráwatsyún and Lachmanjhúla the river flows through a deep gorge which becomes accentuated as the latter place is approached. The steepness of the hills in this part, which constitutes the patti of Lower Dhángu, is such that it has given rise to the proverb *Jána Dhángu, áná ángu*, which may be translated "Go to Dhángu and come back maimed." At Lachmanjhúla the river issues from the hills and flows south-west through the Dún to Hardwár, where it reaches the plains (152 miles). The height of the river above sea level is approximately as follows :—

Bishenprayág	...	...	...	...	...	5,000
Pipalkoti	...	...	...	...	...	3,500
Nandprayág	...	...	...	...	...	2,700
Karanprayág	...	...	...	...	...	2,400
Rudraprayág	...	...	...	...	...	1,950
Srinagar	...	...	...	...	...	1,750
Deoprayág	...	...	...	...	...	1,500
Byásghát	...	...	...	...	...	1,400
Lachmanjhúla	...	...	...	...	...	1,000

4. The Nandákini rises in the small glaciers which lie to the south west of Trisúl and reaches the Alaknandá at Nandprayág after a westerly course of about 35 miles. The upper part of the valley (above Ghát) is in general a mere gorge. The lower part is fairly open.

Tributaries of the Ganges.
Nandákini.

The Pindar rises in a small glacier of the same name in the Almora district close to the peak of Nandákot, and flowing south and south-west enters the Garhwál district below Kunwári village. Then it takes a westerly and afterwards north-westerly, direction, reaching the Alaknandá at Karnprayág after a course of about 80 miles, of which nearly 60 lie within Garhwál. The valley so far as the Garhwál portion is concerned is fairly open, except for about seven or eight miles between the villages of Bagoli and Narainbagar. Its most considerable tributary is the Káulgangá, which rises in a glacier to the south of Trisúl and joins the Pindur at Dewal.

Pindar.

The Mandágni takes its origin in two glaciers overlooking the Kedarnáth temple, and flows in a south-south-westerly direction through a narrow gorge to Somdwára whence it flows south-east through similar country till it approaches Ukhimath, where the Káligangá and the Madmaheswar rivers are successively received on the left bank. The united stream then flows south with a westerly trend through fairly open country to Rudrapryág where it joins the Alaknandá. The total length is about 45 miles.

Mandágni.

The Nayár consists of two branches, the western or Dewalgarh river and the eastern or Chándpur. The latter is also called the Syús river in its upper course. Both rivers rise in the Dúdatoli range. The West Nayár at first flows almost due north, but soon turns to the west and south-west, finally reaching the junction at Bhatkoti after a course of about 45 miles. The upper reaches of the river are, as usual in the non-glacial hill streams, fairly open, but below Chiphalghát it is enclosed by steep hillsides, which being composed mostly of shale give rise to serious slips every rainy season. The Eastern Nayár flows south-west as far as Kainyúr, then south till it reaches the border of Khátli patti, then turns sharply to the west and north-west till it reaches the junction. Its total length is about 60 miles. The united stream then flows for about 16 miles in a north-westerly direction to the Ganges at Byásghát. There are a few level riverside villages in the upper part but the lower portion generally flows between steep hillsides.

Nayár.

The Hyúnl river, the last tributary of any importance, rises in the Karaundu hills, and with the exception of a few open places flows through a narrow gorge, at first in a south-westerly, but afterwards in a westerly and northerly direction to the Ganges at Phulári. Its total length is about 30 miles.

Hyúnl.

5. The chief of the remaining rivers is the Rámgangá. This river, as well as its tributary the Binau, takes its rise in the Dúdatoli range. The former occupies the patti of Lohba, the latter that of Chauthán; and both rivers flow in a south-easterly direction into the Almora district after passing through these pattis, which are of the open nature, that, as before stated, characterizes the upper reaches of non-glacial rivers. The Rámgangá after passing in a southerly and easterly direction through the western

Other rivers. Rámgangá.

portion of the Almora district again enters Garhwál in the extreme south, and passing eastward through the Pátli Dún turns to the south and debouches on the plains at Kálagarh. The principal tributary in this portion is the Mandál, a river remarkable for the existence on its banks of some very level and good villages.

Gumti.

The headwaters of the Gumti, a little river, which, joining the Sarju at Bageswar, and eventually the Káli (or Sárda or Gogra), finds its way to the plains on the Nepál border, are also in Garhwál, and drain that portion of the Katyúr valley now forming a part of Pindarwár in Badhán of which mention has been made in § 1.

Smaller streams.

The remaining rivers are small streams in south Ganga Salán and the south and west of Talla Salán which find their way direct to the plains. Their length is never more than twenty miles within the hills and usually much less, and their volume is so inconsiderable that their waters soon after reaching the boulder beds of the Bhábar lose themselves in the sand and shingle. The most considerable are the Khoh and the Rawásan. It is by means of these small streams that the cultivation in the Bhábar is carried on, irrigation channels being taken off from them at the point where they issue from the hills.

**Mountains.
The snows.**

6. The mountain system of Garhwál can best be regarded as a series of spurs from the Tibetan watershed, which here separates the Ganges basin (in its larger sense) from that of the Satlej. It has already been stated that this has a north-west and south-easterly direction. The great snow mountains which form such a conspicuous feature of Himalayan scenery lie not on this ridge but from thirty to forty miles to the south-west of it. The principal ones in Garhwál may be divided into two groups, the Nandádevi range and the Badrináth range. Each presents as it were a snowy curtain stretching almost due east and west for 25 miles, the flanks of the former being the peaks of Nandákot and Trisúl, of the latter the offshoots from the Badrináth or Chaukhambá and Kedárnáth peaks respectively. Nandádevi, a huge monolith, rises in grey outline behind the white snow curtain of Trisúl, the south face of this mountain being so steep that the snow cannot lie on it. Each range sends out a spur towards the other, and at Pipalkoti on the Alaknandá these spurs, each towering a mile in vertical height above the river, approach within a few miles of each other and then drop suddenly down to the stream. This place is the gate of upper Garhwál, and behind the mountain ranges which flank it on either side lies the whole pargana of Painkhandá with an area of 1,592 square miles. Each of these groups is connected with the central watershed by another range hardly inferior to what have been called the main groups, in point of altitude, though by reason of their position behind them, less conspicuous from the plains and lower hills. Another very massive range runs down from the watershed dividing the basins of the Dhauligangá and the Bishengangá, the principal peak being Kamet, 25,443 feet, close to the watershed. With the exception of this group the watershed does not average more than about 18,000 feet and nothing is more startling to the traveller in the Niti and Mána Passes than to find that such snowy mountains as are visible lie to the south and not to the north of him.

The hillman, whose want of reverence for things sacred is proverbial, can never overcome his awe of the great snows. Even the coolie coming suddenly in full view of the range will salute what is to him the abode of the Deity, while the more piously inclined will put his hands together and murmur a short prayer.

Minor ranges.**Tungnáth.**

7. The minor ranges throughout Garhwál are offshoots of the two great snowy groups. From the Badrináth flank of the western range a spur runs down southwards through Tungnáth to the Alaknandá at Rudraprayág, separating the basin of this river from that of the Mandágni. From the Kedárnáth flank of the same range a spur runs down south to Deoprayág separating the basin of the Mandágni and Alaknandá from that of the Bhágirathi. The greater part of this spur lies in Tehri Garhwál. On the other hand, from the eastern or Nandádevi group one spur (that on which Rámi stands) runs westward from Trisúl to the Alaknandá, separating the valley of the Nandákini from that of the Birehi; another (remark-

Rámi.

able for the peak of Jatropáni, 13,356 feet) separates the Nandákini from the Kailgangá and the Pindar, while a third separates the Pindar from the Kailgangá. But the spur which more than any gives the key to the mountain system of Garhwál is the one which proceeding from Nandákot runs down the left bank of the Pindar in a south-westerly and afterwards westerly direction to the Dúdátoli range, which is the most considerable feature of the mountains of central Garhwál. This ridge it will be seen divides the waters which find their way to the plains at Barmdeo from those which travel to Hardwár, and a southern offshoot of it close to Badhángarhi peak divides the waters of the Rámgangá from either. Dúdátoli, however, though geographically a continuation of this spur, is of essentially different composition. The Gwáldam range is of hard black limestone rock forming as a rule very precipitous hillsides, and weathering down to a rich clay soil. The Dúdátoli rock, on the other hand, is a conglomerate of flints and sand, white in appearance, and forming the most gently sloping hillsides in the whole of Garhwál, while it weathers down to a light sandy soil. In Lohba patti the contrast is most striking. To the west of the Rámgangá the soil is generally poor and sandy, to the east it is a rich agricultural clay. Excluding the snows and the spurs immediately adjoining them, Dúdátoli is the most massive range in the whole of the Kumaun Division. The main peak is 10,188 feet above sea level, and the fifty square miles of area surrounding it are in their lowest part 6,000 feet above sea level and hence hitherto preserved in a compact block intact from cultivation. Spurs which preserve a mean elevation of 8,000 feet to a distance of eight or ten miles branch off on all sides. Of these the most important are one north-west to the Dhanpur range, another south-west to the Devithánk and Ameli group, and a third south to the Khátli hills. In the Dhanpur range, once remarkable for its copper mines, the precipitous black rock of the Badhángarhi spur is resumed. The range runs due east and west preserving an altitude of over 9,000 feet for six or seven miles and containing several peaks of over 9,800 feet. Thence the range is continued eastward and southward through Khirsu, Devidat (above Pauri) and Ránigarh (Adwáni), all of which peaks are over 7,000 feet and few parts of the range less than 6,000 feet, to Byásghát, the whole thus separating the Nayár valley from the Alaknandá. The Ameli spur which is continued to their junction separates the valleys of the two Nayárs. The third spur with the ranges continuing it forms the eastern and southern boundary of the Nayár basin as the first formed its northern and western. The Khátli range which is joined to Dúdátoli by this spur runs east and west and may be said to continue from Khamlekarhi on the Almora border to Rikhni Khál, a low pass between Iriyákot and Painon. The principal peak is over 8,000 feet and there are several above 7,000 feet. The ridge is continued towards the west and between Rikhni Khál and Chameté Khál (about 4,000 feet) may be called the Utain range from the principal peak which is over 6,900 feet. The ridge thence continues in a succession of peaks, among which Kálagarhi (Lansdowne) and Langúr-garhi are the most important, and passes to Karaundu (*Kich-ká-dándá*) where the ridge splits into two which enclose the Hyúnl valley and separate it on the one hand from the Nayár and Ganges and on the other from the minor streams flowing direct to the plains. Various more or less well defined spurs separate these from each other and from the Rámgangá.

8. Along with the mountains some account should be given of the lakes of Garhwál. These are for the most part unimportant, many of the so-called lakes, Dyúr Tál (near Gopeswar), Tarág Tál, Sub Tál, Beni Tál, being merely ponds of stagnant water formed in depressions on the ridges by the annual rainfall. There are some considerable lakes in the interior of the snowy range, such as Satopant, Lakpál-ká-kund, Deo Tal ranging between twenty and forty acres in area, but these are almost inaccessible. Exclusive of them the largest lake in Garhwál was until recently Dyúr Tál above Ukhimath, which, situated at an elevation of about 8,000 feet, has an area of about fifteen or twenty acres, and which is said, in the clear blue of its waters and its scenery and surroundings, to be a miniature of Naini Tal.

Jatropáni.

Balón.
BadLángarhi.

Dúdátoli.

Dhanpur.

Khátli.

Utain.
Other ridges.

Lakes.

But the giant among Garhwal lakes and indeed among those of the whole of Kumaun is the recently formed Durmi Tál, to give it the native name, produced by the celebrated Gauna slip of 1893, which notwithstanding the mass of water poured down the valley in the flood of August 1894, still measures two miles in length and half a mile in maximum breadth with an area of nearly four hundred acres, more than three times the size of Naini Tal.

Climato.

9. As might be expected in a district which varies in altitude from the level of the plains of India to the summit of the highest peak in British territory in the world, the climate is exceedingly diversified. The Bhábar or strip of level land below the hills, with the exception that it enjoys about double the rainfall, has a climate almost identical with that of the submontane districts in the plains. The climate of the river valleys can hardly be called good at any time of year, and it is here of course that the most level and fertile land is to be found. From March to the end of October, except during or shortly after heavy rain, the heat is always excessive, during the hot weather seldom falling below 80°. Partly owing to the intensity of the sun's rays through the comparatively thin hill air, but chiefly, no doubt, owing to their reflection from the two steep hillsides which, as a rule, shut the valley in on either side, the heat of the sun during the middle of the day in these situations in the months of May and June is a thing not to be imagined except by those who have experienced it. During the rains and for a month or so after their termination, or from July to October, fever is also very prevalent. During the cold weather, from November to the beginning of March, river valleys are usually, during the greater part of the forenoon, shrouded in heavy mist. This mist, due no doubt to the condensation of the particles of water evaporated during the day, comes on during the night, and is accompanied by the most intense cold. Hoarfrost may be found on the grass in the valley, while the hillside, a thousand or so feet above, is quite free from it. At the same time, the heat of the sun, both direct, and reflected from the sides of the hills, is, during the middle of the day, oppressively strong, and the combined effect of the heat by day and the cold by night is sufficient to cause fever even to hillmen who are not accustomed to it. In open situations even five hundred or a thousand feet above the valley the climate is more equable and is not subject to the same extremes of either heat or cold, though in all places below 5,000 feet the heat is excessive during the months of May and June, the maximum in the shade ranging from about 94° at this height to 110° in the valleys. Moreover in April the hillmen begin firing the forests, usually in order to consume the pine needles and with the object of assisting the new grass to spring up, and at the same time the dust from the plains is blown across the hills by the prevailing winds. It is a popular impression that the climate of the hills is as good as that of Europe, if not better; but this only applies to those parts which are at a considerable elevation, not those in which agriculture is carried on, which rarely exceed 5,000 feet. Mr. Batten says: "Agricultural labour out of doors cannot be performed by Europeans with safety to their health in any part of the hills where agriculture could be made a means of livelihood and gain." Sir Henry Ramsay also has a passage to the same effect. It is well known that plainmen are more averse to service in the hills than hillmen are to service in the plains. The latter finds several mitigating circumstances in the plains, but the former, if even he can be got to admit so much, can only find one in the hills, the goodness of the water. Snow in the south of the district rarely falls below 5,000 feet, though in the north it occasionally falls as low as 4,000 feet. The great snow mountains appear to cause a lowering of temperature in their neighbourhood in two ways; first directly, by cooling the air in contact with them, which then sinks down by its own weight into the valleys below, and secondly, in the way common to all hills, by raising any current of air which attempts to pass over the peaks, the air is expanded and thus dynamically cooled, and if moisture is present in sufficient quantities it is condensed and rain is deposited. The consequence is that the country immediately in front of the great snowy ranges, in the same manner as the Bhábar, gets a most copious rainfall. In April and May during an ordinary year scarcely a day passes in this

part without a shower, and the rains may be said practically to commence with the beginning of June, though they are not so heavy or so continuous as later in the season. On the other hand, the region behind the snowy ranges gets very little rain, and such moisture as is deposited falls chiefly during the cold weather in the form of snow, with which every thing above 9,000 or 10,000 feet is covered from the middle of November to the middle of April. In the summer the snow line rises to about 18,000 feet. South of the range of snows, on the other hand, though hills less than 13,000 or 14,000 feet are not usually covered with snow throughout the cold weather, yet owing to the more abundant summer rain and consequent deposit of snow on the higher ranges during that season, the perpetual snow line lies between 13,000 and 17,000. Above about 7,000 feet in the south and 6,000 feet in the north, (*i. e.*, within ten or fifteen miles in front of the great snows, or behind them), the climate is cool throughout the year.

The natives divide the year into three parts: the *baskál* or *chaturmáds*, the four months of the rainy season, or Ashár, Sáwan, Bhádou, Asoj, from 13th June to 12th October; the *sitkálá* or cold weather, including Kartik, Mang-sár, Pús, Moh (Mágh) from 13th October to 12th February; and the *rári* or hot weather, Phágun, Chait, Baisákh, Jeth, or from 13th February to 12th June. During the *rári*, hailstorms of considerable violence accompanied by thunder and lightning are not uncommon. They are practically confined, however, to the vicinity of high mountains and are exceedingly local in their effects. The crops in half a field may be cut to pieces, while in the other half they are left untouched.

10. The observed annual rainfall of Garhwál averages from 36·52 inches at Srinagar to 93·45 at Kotdwára. It is impossible to give any figure for the average of the whole district because the rainfall received in any given place appears to depend so largely on its surroundings. Generally speaking, the maximum falls occur at the two points where a general rise in elevation takes place, namely, the foot of the hills and the foot of the snows. In both places the average rainfall may be taken as nearly one hundred inches. The actual figures for Kotdwára are 98·45 inches and at Ukhimath, though some distance from the foot of the snows, the rainfall is 80·30 inches. At points between these two, there is no great and general rise in elevation; the hills do not considerably increase in height as the traveller penetrates further into the interior, but, as already seen in §2, the country is by no means a plain. The principle in this portion of the district appears to be that, so far as the monsoon rains at any rate are concerned, in the vicinity of high hills the rainfall is heavy, while at a distance from them the rainfall is light. Thus at Srinagar, where there are no high hills within five or six miles, the average rainfall is 36·52, while at Karoprayág, a place of much the same altitude, at the bottom of a deep gorge and shut in on every side by high hills, the rainfall is 53·12 inches. At Pauri, situated at an elevation of 5,600 feet but near similarly high hills, the average rainfall is also about fifty inches. It has been already stated in the last section that in the case of places behind the range of snows the monsoon rainfall is less, while the winter rainfall is greater than in front of the snows. An instance of this occurs in the case of Joshimath. The average precipitation here between the 16th June and the 15th October is only 22·96 inches, while at Ukhimath, in front of the snowy range, it is for the same period 61·30 inches, and at Pauri 33·60 inches, calculated for the last 14 years. On the other hand, the rainfall during the rest of the year at Joshimath averages 20·30 inches, while at Ukhimath it is only 18·92 and at Pauri 13·09. Besides the measured rainfall, a great deal of moisture is deposited at Joshimath (6,100 feet) during the winter months in the form of snow, which is unsusceptible of measurement, while at Ukhimath (4,300 feet) and Pauri (5,600 feet) very little snow falls. Joshimath is, however, at the head of a gorge leading up into the heart of the snowy range, and so gets a larger monsoon rainfall than other places behind the snows. At Niti, for instance, the rainfall from July to September has been observed in one year as 5·5 inches, while in winter the precipitation is so heavy that the whole valley is blocked with snow.

Rainfall.

According to the native opinion the summer rain comes from the plains, while the winter rain comes from the hills. Perhaps this is to some extent borne out by the fact that the winter rainfall varies inversely as the distance from the snows. Thus the rainfall at Ukhimath is greater than at Karnprayág, at Karnprayág greater than at Srinagar and at Srinagar greater than at Kotdwára.

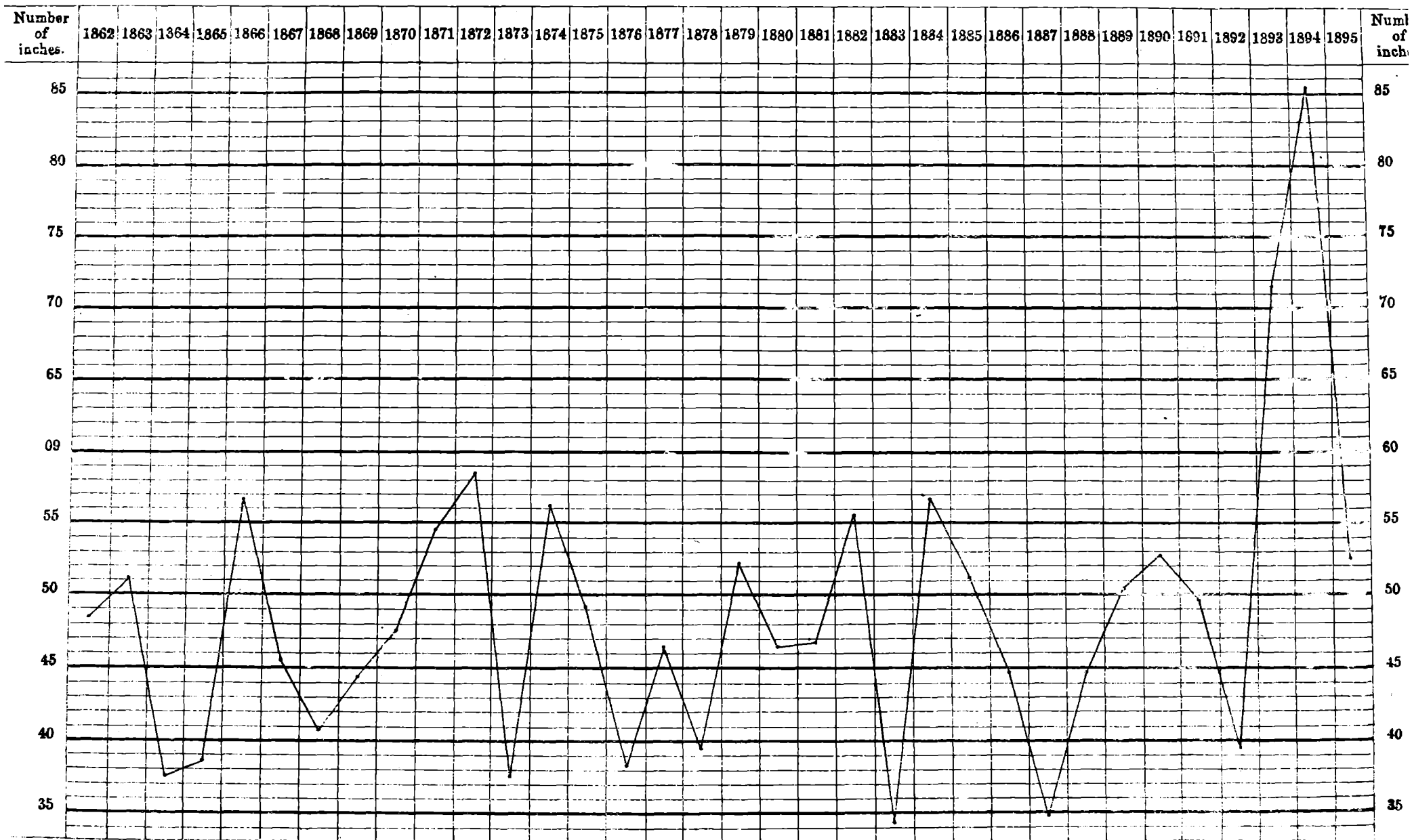
The driest month in the year is November when the rainfall averages less than half an inch; December is the next driest with a rainfall of from half to three quarters of an inch on the average, though in a wet season, as in 1877, 1885 and 1894, two, three and four inches are received. After these the driest month is April, when the rainfall averages an inch and rarely exceeds two. The rains usually break earlier than in the plains, heavy showers, apparently of local origin, accompanied by northerly and westerly winds, frequently occurring about the same time that the monsoon reaches Bombay. The scouring action of these early showers on the dried up and pulverous soil is very great, and the damage done by erosion in spite of the comparative smallness of the fall is usually much greater than at any other time of the year. A long break during the rains is frequently fatal to the crops, as owing to the rapid slope of the hills the water soon drains off, and in a few days the ground is dry and hard, while a fortnight's fine weather renders it almost as dry and dusty as in the middle of the hot weather.

A chart is annexed shewing the yearly rainfall at Pauri since 1862. It will be seen that the rainfall has been usually about fifty inches, except in 1893 and 1894, respectively the years of the Gauna landslip and flood, when it was largely excessive. The famine years of 1878, 1890 and 1892 are not distinguished by either deficient or excessive rainfall; a fact, however, which only emphasizes the variation in rainfall in different parts of the district, and the importance at any given place of timely rain rather than a heavy fall. A native proverbial expression states that for each star seen during Sáwan and Bhádon (13th July to 13th September) a 'biswa' (twenty *kháras*—about ten tons) of grain is spoilt. A statement shewing the rainfall of each station in the district since 1862 is attached as Appendix XIII to this report.

Vegetation.

11. Closely connected with the subject of climate and rainfall is that of vegetation. In the Bhábar, owing to the great rainfall and the heat, growth is very rapid, and after the rains all uncultivated ground is covered with grass eight or ten feet high. The same cause is very favorable to the growth of trees, which again tend to prevent the scouring of the hillsides and subsequent slips, which result when this heavy rainfall is poured on to the bare soil. With the exception of a small piece of land near Kotdwára, the whole of the Bhábar together with the hills immediately above it consists of reserved forest, which stretches across the whole district in a compact belt varying in width from fourteen miles to two, from the Naini Tal boundary to the Ganges. The chief tree of the southern forests is the *sal* (*Shorea robusta*). Although this tree flourishes up to a height of 4,000 feet, it is seldom met with north of the Kháti-Karaund range, and north of the Nayár is practically non-existent. The natives dislike this tree near their cultivation, as they say that white ants are sure to be found wherever it exists. In the interior of the district the *chír* (*pinus longifolia*) is the principal component of the forests up to about 6,000 feet, above which though occasional specimens are met with, the tree can hardly be said to flourish. Its place is then taken by the *bánj* (*quercus incana*) which constitutes the bulk of the forests between 6,000 and 8,000 feet. Associated with it is usually found the *buráns*, the tree rhododendron, red-flowered, which, however, flourishes up to 10,000 feet. Above 8,000 feet the *bánj* gives place to the hardier oak, the *tílonj* (*quercus dilitata*) which grows up to 10,000 feet. Above this the principal trees are the firs *rága* and *ránsula*, the yew (*thuner*), and the cypress (*suráin—cupressus torulosa*) along with the *chimor* or *chimola*, the variegated rhododendron, a true shrub branching out from the root, with flowers of all colours, pink, purple and blue, down to pure white. Above all is the birch, which grows up to a height of about 12,000 feet. The rhododendron is not commonly found to the north of the snowy range. In the Niti Pass, the *pinus excelsa*, here known as the *jhála*, a tree very similar

CHART SHOWING ANNUAL RAINFALL AT PAURI GARHWAL BETWEEN 1862 AND 1895, A.D.



in appearance to the *chir*, and commonly so called except by the Bhotiyás, is found growing alongside the birch at an elevation of over 11,000 feet. Above 11,000 feet south of the snowy range, and at a rather higher elevation to the north of it, the forest abruptly ceases and is succeeded by a vast expanse of grass, which extends close up to the line of perpetual snow. Of cultivated crops rice grows up to about 5,000 feet; *jhangora* (*oplismenus frumentaceus*) and *mandwá* (*eleusine coracana*) to about 6,000 feet. Above that, *chua* (amaranth) is the standard *kharif* crop, while above 8,000 this is replaced by *phápar* (*fagopyrum tataricum*) a species of buckwheat. Above 8,000 feet only one crop can be grown in the year, *viz.*, during the summer. Wheat grows up to 10,000 feet, and barley and mustard up to 11,000 feet. Cultivation above 8,000 feet is non-existent except in Painkhandá, where the Tibetan trade sustains agriculture under the most discouraging circumstances.

12. The district is at present divided into eleven parganas and eighty-six *pattis*. The name pargana was introduced with the British rule, the regular native term being *patti* as in Tehri Garhwál at the present day. The number of *pattis*, too, was not so large as at present. Previous to last settlement there were only fifty-four in all. For instance, those *pattis* now distinguished from others of similar names by the affixes *malla* (upper), *bichla* (midland) and *talla* (lower), *walla* (hither) and *pulla* (further), *taili* (sunny) and *sili* (shady), all except in the case of Nágpur formed one *patti*, *e. g.*, Ganga Salán contained five *pattis* only, Langúr, Ajmír, Udepur, Dhángu and Karaandu. What is now known as Dewalgarh pargana consisted of *pattis* Dewalgarh and Dhanpur, the former including the present *pattis* of Kathulsyún, Chalsansyún, Bachhansyún, Ghurdorsyún, Kandársyún and Bidolsyún. Similarly Chándpur included all the *pattis* in that pargana except Choprákot, Chauthán and Lohbá. In Nágpur the *sadábart* and *gúnth* *pattis* of Parkandi, Bámsu and Maikhandá appear to have been, in accordance with the ruling principle that formerly regulated these subdivisions, made separate at the time of their assignment. The rest of Nágpur apparently continued one *patti*, being subsequently divided, from its unwieldy size, into Nágpur Malla and Talla. The latter included the existing *patti* of the same name and a few villages from Talla Káliphát and Bichla Nágpur. Urgan consisting of *gúnth* villages was also separate. In Dasauli, Band *patti* was separate from the beginning, though now sometimes confused with Talla Dasauli. The *pattis*, as they originally existed, were continually altering. Mr. Traill says: "The existence of numerous petty principalities, the chiefs of which were engaged in constant aggressions on each other, necessarily led to frequent changes in the division of the country, as the conquered villages in receiving a new master were incorporated in his own district." On the country being ultimately united under one sovereign, "the distribution which took place among the feudal tenants of the Crown only led to a multiplication of sub-divisions, without producing order in their demarcation." Villages were classed into *pattis* according to the *thokdár*, without reference to their actual situation. Hence the occurrence of villages belonging to one *patti* in the heart of another, which is frequently found. The classification into parganas was made by Mr. Traill, "the local divisions having been found inconveniently numerous for purposes of account and management." The existing arrangement of *pattis* was made by Mr. Beckett, for the purpose of furnishing convenient circles for the *patwáris*.

The list of parganas and *pattis* is as follows, and for purposes of reference the approximate total and cultivated area of each is also added:—

				Cultivated area.	Total area.
I. Bárabeyún—	1. Núdalsyún	...	...	3	11
	2. Idwálsyún	...	...	6	15
	3. Gagwársyún	...	...	4	16
	4. Sitonsyún	...	...	6	14
	5. Bówatsyún	...	...	2	6
	6. Bangarháyún	...	...	5	14
	7. Kandwálsyún	...	...	3	8

				Cultivated area.	Total area.
	8. Banelsyún	...	...	11·5	24
	9. Paidúlsyún	...	...	5	15
	10. Kapholsyún	...	...	4	13
	11. Khátsyún	...	...	3	11
	12. Patwálsyún	...	...	2	9
	13. Aswálsyún	...	...	9·5	21
	14. Manyársyún	...	...	15	34
	Total	...	...	79	211
II. Chaundkot—	15. Mawálsyún	...	...	5	16
	16. Ringwársyún	...	...	3	5
	17. Jaintolsyún	...	...	3	5
	18. Maundársyún	...	...	12	22
	19. Kingaddigár	...	...	4	23
	20. Pinglápákhá	...	...	1·5	5
	21. Gurársyún	...	...	5·5	16
	Total	...	...	34	92
III. Malla Salán—	22. Talsin	...	...	5	16
	23. Kolágár	...	...	2	14
	24. Iriyákot	...	...	11	48
	25. Bangársyún	...	...	2	17
	26. Dhaundyálsyún	...	...	3	14
	27. Meldbár	...	...	1	5
	28. Sábli	...	...	6	31
	29. Khátli	...	...	9	44
	30. Saindhár	...	...	2	11
	31. Gujru	...	...	5	18
	Total	...	...	46	218
IV. Talla Salán—	32. Bijlot Walla	...	...	4	15
	33. Bijlot Palla	...	...	5·5	22
	34. Búngi	...	...	6	33
	35. Painon	...	...	10	71
	36. Badalpur Malla	...	...	11	36
	37. Badalpur Talla	...	...	4	32
	38. Síla Malla	...	...	8	39
	39. Síla Talla	...	...	3	14
	40. Kauriyá Walla	...	...	4	12
	41. Kauriyá Palla	...	...	1	3
	42. Bhábar	...	...	8	24
	Total	...	...	64·5	301
V. Gangá Salán—	43. Langúr	...	...	13	37
	44. Ajmír	...	...	11	49
	45. Udepur Malla	...	...	7	26
	46. Udepur Bichla	...	...	12	38
	47. Udepur Talla	...	...	13	50
	48. Dhángú Malla	...	...	11	31
	49. Dhángú Talla	...	...	11	57
	50. Karaundu Walla	...	...	3	13
	51. Karaundu Palla	...	...	4	10
	Total	...	...	85	311
VI. Dewalgárh—	52. Kathúlsyún	...	...	5	18
	53. Chalansyún	...	...	5·5	24
	54. Bachhansyún	...	...	5	26
	55. Dhanpur	...	...	5	61
	56. Ghurdorsyún	...	...	4	30
	57. Bidolsyún	...	...	2	12
	58. Kandársyún	...	...	6	63
	Total	...	...	32·5	234

				Cultivated area.	Total area.
VII. Cháandpur—	59. Choprákot	...	...	9	109
	60. Dháijyuli	...	...	3	22
	61. Chauthún	...	...	5	44
	62. Lohba	...	...	8	95
	63. Ránigarh	...	...	1	17
	64. Cháandpur Talli	...	...	6	51
	65. Cháandpur Sili	...	...	6·5	44
	66. Sirgur	...	...	2	20
	Total	...	...	40·5	402
VIII. Badhán—	67. Kapiri	...	...	2·5	19
	68. Karákot	...	...	2·5	27
	69. Khansar	...	...	1	30
	70. Pindarwár	...	...	7	88
	71. Pindarpár	...	...	5·5	284
	72. Nandák	...	...	2	146
	Total	...	...	20·5	594
IX. Dasauli—	73. Dasauli Malli	...	...	2	98
	74. Dasauli Talli	...	...	6	104
	75. Band	...	...	1	12
	Total	...	...	9	214
X. Nággpur—	76. Káliphát Malli	...	...	3	221
	77. Káliphát Talli	...	...	6	56
	78. Maikhandá	...	...	1	116
	79. Parkaudi	...	...	1·5	27
	80. Bámsu	...	...	1	11
	81. Nággpur Malla	...	...	4	155
	82. Nággpur Bichla	...	...	10	102
	83. Nággpur Talla	...	...	8	39
	84. Urgam	...	...	1	64
	Total	...	...	35·5	793
XI. Painkandá—	85. Painkandá Malla	...	...	1·5	1,460
	86. Painkandá Talla	...	...	3	132
	Total	...	...	4·5	1,592
	Add for reserved forests in the south	...	...	...	509
	Total for the district	...	...	451	5,471

13. The population of Garhwál appears to consist of a substratum of low-caste non-Aryan aborigines, with successive layers, as it were, of Aryan invaders and immigrants superimposed. The aborigines are the *doms*, who appear to have been reduced by the first invaders to a state of slavery from which they have not yet fully emerged. The history of this first conquest is altogether lost, but it would appear to have been effected by the ancestors of the present Khasiyas, who were accompanied by various castes of Bráhmans, as the former of these can in no case give any account of their origin, while the latter are often reproachfully called the aborigines of the district by more recently arrived Bráhmans (Pandit Ganga Datt Upreti, "Notes on the prevailing castes of Garhwál".) These in turn appear to have been subdued by high castes, Kunwars, Jhinkwáns, Sajwáns, Pharswáns, &c., who date their arrival in the country previous to the invasion of Rájá Kanakpál, and appear at that time to have been ruling over parts as petty chieftains. Most of the higher castes in the district profess to have come hither with Rájá Kanakpál, who conquered Garhwál in the latter end of the seventh century, and founded Cháandpur Fort. These castes, both Bráhmans

People.

and Rájputs, are equal, if not superior, in point of precedence to all others in Garhwál. This would seem to indicate that since that time there has been no great conquest accompanied by a settlement of the invaders. The castes which have settled in the country have come in rather as immigrants than conquerors, and these may be said to constitute the fourth stratum of Hindus. Any mixture of race between Doms and Hindus is made impossible by a rigorous system of outcasting.

Caste distribution.

14. Although the caste distinction between Hindus and Doms is so strong, and although the number of Hindu castes in Garhwál must number several hundreds at the least computation, yet the Garhwáli, as a rule, has far less caste prejudice than the plainsman. The bulk of the population consists of Bráhmans, Chattris or high caste Rájputs, Khasiyás or low castes and Doms. Men of the Hindu castes are known as *bith* in distinction to the Doms, but the name is usually applied to the Chattri only. The Khasiya is distinguished from the Chattri by the fact of his not wearing the sacred thread or *janeu*, which indicates a Sudra origin. The most numerous body adhering to this custom are the *Pabilas* or hemp spinners of Chándpur pargana. But many Khasiyas who have really no right to the thread have assumed it in imitation of the Chattris. The process may be seen still going amongst the Negis of the village of Ira, Maundársyún, where, although of the same origin, some have assumed the thread while others have not. But beyond being looked down on to a certain extent by the thread-wearing castes, the Khasiyas suffer from no particular disability. The Chattri or Bráhman will eat bread cooked by them, equally with that cooked by a Bráhman; and as regards rice, a Chattri or even Khasiya will not eat rice cooked by a Bráhman unless he be a *Sarola*. Intermarriage between the Rájput clans and Khasiya castes is not usual, although all the former intermarry freely; but many well-to-do, and therefore respectable, Khasiya castes, who have assumed the thread generations ago, have succeeded in intermarrying with Chattri clans, and have by this means attained to a practical equality with the latter. The Pandás or priests who accompany pilgrims to Kedarnáth temple, though calling themselves Bráhmans and assuming Bráhman names, are in reality Khasiyas, and intermarry with Khasiya castes. Neither Bráhmans nor Chattris will intermarry with them. It is this circumstance which has given rise to the proverb *Kedár hai khas mandir*, or "Kedarnath is the Khasiya temple." The minor castes or subdivisions of Bráhmans and Chattris are largely local, *e.g.*, Dimris are so called from their village of Dimar; Khanyúris from Khanyúrá in Síli Chándpur; Bartwáls of Nágpur, from their village Baret; and Aswáls from Aswálsyún. Amongst Doms, on the other hand, caste names are given exclusively from the employment followed, *e.g.*, *lohár* blacksmith, *or*, mason. Whether the local names of the former were originally conferred as a title of honor is doubtful, though from the analogy of local titles in Europe one might be tempted to suppose so. It is by no means uncommon, however, for a man to vary his caste according to his improved position in the world, and the present settlement has afforded some instances of this. Thus a plain Khasiya "Negi" would write himself down "Mona Negi," a Chattri caste,

"Hote ke ún nám,

Pharsi, Pharsu, Phars Rám."

The village boy is saluted as Pharsi by his elders. When he becomes a man, he is familiarly called Pharsu by his fellows; but when he attains an honorable position, he will insist on being called Phars Rám.

Besides the Hindus and Doms, who are met with throughout Garhwál, there are several castes peculiar to certain parts.

The Bhotiyás as they are loosely called by the southern people, and who themselves equally loosely characterize all the southern people as "*Gangáris*," occupy the villages in the Niti Pass above the Rishigangá, and the village of Mána in the Mána Pass. They consist principally of three castes, Tolchas, Márchas and Khámpas. There are also some Joháris or men of the Johár Pass in Kumaun, and amongst themselves they recognize a large variety of subcastes. The Khámpas are Tibetans, now naturalized as British subjects. They reside only in the village of Gurguti in the Niti Pass. The Márchas

inhabit *Mána*, *Niti*, *Gamsáli* and *Bámpa*. They will eat with *Khámpas*, but will not intermarry with them. The *Tolchas* inhabit the villages below the *Márchas*. They take bread with the *Márchas* but not rice, and will not eat with the *Khámpas* at all, though they drink tea with them. The *Tolchas* intermarry with some of the *Khasiya* castes in the north of the district, while the *Márchas* cannot. The *Tolchas* will give their daughters in marriage to the *Márchas*, but will not receive in marriage girls of the latter caste. Both castes appear to be of Tibetan origin, the *Tolchas* more, and the *Márchas* less diluted with *Khasiya* blood. None of these castes wear the sacred thread.

Muhammadans are few in number. There are one or two Muhammadan village communities scattered about the district, such as *Dhánai* in *Taili Cháudpur* and *Bhairgaon* in *Ajmír*; but in none of them is any attempt made to keep up the form of Muhammadan worship, and they are looked on by the surrounding Hindus as little better than *Doms*. The inhabitants of *Dhánai* were even ignorant of the meaning of the word *masjid*, and their whole religion is comprehended in their trade of making glass bangles. Some Muhammadans are also found in the towns of *Kotdwára* and *Srinagar*. The latter place contained a mosque, which, however, has not been rebuilt since the flood. No mosque has ever been built at the former place.

At *Srinagar* and a few other places there are some men of the *Baniya* caste, immigrants from the plains of comparatively recent date. Around the same place as well as in scattered parts of the district are a large number of cultivating faqirs, *Giri*, *Puri*, *Ráwal*, *Náth*, etc. Except for their dress and a few customs, they differ little from other cultivators.

15. A statement is subjoined showing the principal cultivating castes, and the amount held by each as proprietor, *kháekar* or *sirtán*. It is not possible to shew all castes, as the number of these is exceedingly numerous. The *Khasiya* castes have been approximately separated from the *Rájput* clans, and the *Sarola* from the *Gangári Brahman*s, while the *Bráhman* castes who can give no account of their origin and are by profession mere cultivators and ploughmen are classed as *Khas Brahman*s. Caste names in the hills are little more than surnames in Europe, and are about as numerous. The total number in the cadastrally surveyed parts of *Garhwál* alone is 1,104. It is a curious point about these names that castes such as *Ráwats*, *Bisht*s and *Negis*, without any qualifying prefix, are usually reckoned as *Khasiyas*, while those with a local prefix, such as *Gorlá Ráwat*, *Bangári Ráwat*, *Kapholá Bisht*, *Kandári Gusain*, are high castes. This is partly due to the lords of the soil, the *thátwáns* or grantees, taking the local name of their fief to distinguish them from the original *Khasiya* clans, and partly to *Khasiyas* of no particular caste taking such names as *Bisht*, *Ráwat* and *Negi*, in accordance with the proverb "*Bhúl chuke ko Káshub gotra*." Men whose ancestry are unknown are all included among the numerous descendants of the *rishi Kashyap*. On the other hand, many local names are held by low castes, e.g., *Baingwára Brahman*s, so called from their village of *Baingwári*, and many others.

Proprietary and cultivating castes.

Number.	Name of caste.	Proprietors.		Kháekars.		Sirtáns.		Total.		Remarks.
		Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	Number.	Area in acres.	
1	2	3	4	5	6	7	8	9	10	11
1	Sarolá Brahman—									
	Nautyál ...	430	2,000·3	83	164·0	61	69·3	574	2,233·6	
2	Thaplyál ...	357	1,416·2	75	215·1	88	76·3	520	1,706·6	
3	Other Sarolás ...	780	3,394·5	78	199·1	144	169·5	1,002	3,763·1	
	Total, Sarolás ...	1,567	6,810·0	236	578·2	293	315·1	2,096	7,703·3	

Number.	Name of caste.	Proprietors.		Khúekars.		Sirtáns.		Total.		Remarks.
		Number	Area in acres.	Number.	Area in acres.	Number	Area in acres.	Number.	Area in acres.	
1	2	3	4	5	6	7	8	9	10	11
4	Gangári Brahmans—									
	Kukroti ...	299	2,583·6	26	138·4	71	109·0	396	2,831·0	
5	Ghildiyál ...	228	969·9	26	129·0	23	28·6	277	1,128·4	
6	Naitháni ...	205	1,188·7	39	114·7	76	70·1	320	1,373·5	
7	Joshi ...	229	1,154·8	79	199·3	81	84·1	389	1,438·2	
8	Barthwál ...	256	1,260·7	50	113·2	38	39·7	344	1,413·6	
9	Badolá ...	163	1,026·0	61	283·3	29	38·0	253	1,347·3	
10	Dhayáni ...	337	1,816·1	112	376·0	62	88·2	511	2,280·3	
11	Dabrál ...	108	1,379·0	18	25·6	6	4·1	132	1,408·7	
12	Kálá ...	223	874·2	33	161·8	50	65·7	306	1,101·7	
13	Juyál ...	185	1,142·8	115	396·1	62	59·9	362	1,598·8	
14	Dobryál ...	163	1,263·9	20	88·1	11	27·2	194	1,379·2	
15	Dhaundyál ...	252	895·4	107	486·0	75	178·4	434	1,610·6	
16	Pokhryál ...	153	645·0	212	550·1	69	53·6	424	1,248·7	
17	Sundryál ...	159	927·2	56	150·6	66	25·0	281	1,102·8	
18	Other Gangáris ...	2,307	10,632·0	976	2,336·3	669	757·9	3,952	13,726·2	
	Total, Gangáris ...	5,267	27,759·3	1,930	5,500·2	1,378	1,629·5	8,575	34,889·0	
19	Khas Brahmans...	3,685	24,625·8	1,454	5,541·2	1,147	1,878·2	6,286	32,045·2	
20	Inferior Brahmans,	397	1,948·4	210	998·0	103	231·3	710	3,177·7	
	Total, Brahmans...	10,916	61,143·5	3,830	12,617·6	2,921	4,054·1	17,667	77,815·2	
	Chhattris—									
21	Sajwán ...	150	995·9	50	79·9	11	6·4	211	1,082·2	
22	Aswál ...	419	1,990·5	77	213·0	72	142·6	568	2,346·1	
23	Butolá ...	289	1,582·3	53	142·9	68	149·6	410	1,874·8	
24	Rauthán ...	230	1,332·4	48	185·5	14	40·0	292	1,557·9	
25	Kandári Gusáin ...	489	2,324·7	151	604·5	44	77·7	684	3,006·9	
26	Gorlá Ráwat ...	353	2,303·1	84	324·0	28	28·9	465	2,656·0	
27	Bhandári ...	588	2,857·1	200	588·2	121	116·0	909	3,555·3	
28	Kapholá Bisht ...	369	1,934·0	76	269·8	57	80·7	502	2,284·5	
29	Mahar ...	802	4,113·8	251	1,158·6	173	341·6	1,226	5,614·0	
30	Bangári Ráwat ...	215	863·6	83	367·9	43	67·2	341	1,298·7	
31	Ránú ...	337	1,916·4	124	393·5	78	76·0	539	2,385·9	
32	Narwáni Ráwat ...	125	1,307·0	22	45·8	9	18·8	156	1,371·6	
33	Maundará Ráwat,	76	1,062·7	2	7·1	1	1·0	79	1,070·8	
34	Sauntyál ...	226	971·4	77	265·7	9	19·7	312	1,247·8	
35	Ghurdorá ...	205	1,023·2	84	225·9	40	34·8	329	1,283·9	
36	Rikhólá ...	261	1,398·7	103	358·2	50	136·8	414	1,893·7	
37	Mahá Negi ...	308	2,051·0	172	656·4	68	207·7	548	2,915·1	
38	Patwál Gusáin ...	419	2,247·5	168	563·3	77	102·4	694	2,913·2	
39	Padyár Bisht ...	286	1,806·9	112	431·2	44	72·4	442	2,310·5	
40	Bhuláni ...	151	983·5	51	276·3	9	20·6	211	1,280·4	
41	Other Chattris ...	2,339	13,285·1	783	2,535·7	394	624·4	3,516	16,445·2	
	Total, Chattris ...	8,667	48,350·8	2,771	9,693·4	1,410	2,350·3	12,848	60,394·5	
42	Khasiyás ...	14,376	82,167·0	5,867	20,461·8	3,033	5,964·9	23,276	1,08,593·7	
43	Jogis ...	200	479·3	120	282·8	88	112·6	408	874·7	
44	Vnishnavs ...	25	118·8	19	29·8	5	30·4	49	179·0	
45	Baniyás ...	213	750·4	93	364·7	93	161·4	399	1,276·5	
46	Sarawagias ...	4	4·0	...	...	...	...	4	4·0	
47	Sikh Dáss ...	3	4·1	...	...	...	...	3	4·1	
48	Doms (upper class),	410	1,373·9	1,792	3,034·9	2,915	2,693·4	5,126	7,102·2	
49	Doms (lower class),	64	334·6	601	760·0	1,157	768·5	1,822	1,863·1	
50	Muhammadans ...	21	172·1	20	82·5	20	43·4	61	298·0	
51	Europeans ...	2	39·6	...	...	...	...	2	39·6	
52	Native Christians,	18	145·3	15	14·4	11	18·3	44	178·0	
53	Sweeper ...	2	2	...	...	...	...	2	2	
	GRAND TOTAL ...	34,930	1,95,083·6	15,128	47,341·9	11,653	16,197·3	61,711	2,58,622·8	

It will be seen that Chattri and Khasiya castes cultivate about two-thirds of the total area and the remainder is mostly held by Brahmans. In the *gánth* villages the proportion is almost reversed, the Brahmans holding five-eighths of the whole.

Three quarters of the whole assessable area is cultivated by proprietors, and of the remainder, three quarters by occupancy tenants and the one quarter or about one sixteenth of the whole by tenants-at-will. The proportion of land held by Brahmans,

Chattris and Khasiyas as proprietors, occupancy tenants and tenants-at-will, respectively, does not vary much, though the lower castes among these hold generally proportionately more land as tenants. The Doms hold very little land as proprietors.

A corresponding statement for proprietary castes is not given, as the preparation of the present statement from the original records has taken some months, and a further similar delay is undesirable. Moreover, as most of the land is cultivated by proprietors, this is hardly necessary. The statement of course only refers to the cadastrally surveyed portion of the district, and is thus not complete for the whole.

16. The village is usually built on a spur jutting out from the hillside. The site is thus well-drained and dry, while at the same time safe from landslips. In the far north, avalanches are chiefly to be guarded against; and here, owing to the steepness of the hillsides, it is seldom possible to build the village on the summit of a ridge. Consequently the destruction of villages is by no means uncommon. But the general practice of building villages on a high and dry situation is well exemplified by the fact that in the Gauna flood of 1894 only five villages were destroyed. Another consideration in the situation of a village is that the spring in the adjoining ravine (in most ravines there are springs either higher up or lower down) shall be approximately on a level with the village; but as there are a few parts of a hillside where water cannot be brought in a canal, this is of minor importance. In former times it appears to have been the custom for the ruling family to build itself a square high walled enclosure on some commanding site in the village, inside which the houses were erected. Instances of such exist in Báwe, Talla Nágpur, Ira, Maundársyún, and many other villages. The usual form consists of two rows of houses facing one another, the backs of which thus formed two sides of the square, while at either end high walls formed the other two sides. Each wall had a carved wooden doorway, and the middle of the enclosure formed an open courtyard. The whole is suggestive of a defensive structure, either against foreign enemies, or against the vassals of the grantees. Near this main building, arranged as the nature of the ground permitted, were the houses of the remaining villagers. At the present time the tendency is to do away with these walled enclosures wherever they still exist, as the houses are found too small for modern requirements. The dwellings of the Chattri and Khasiya families are now clustered irregularly according to the nature of the ground, usually in rows in front of each of which the series of *chauks* (a paved space before the house) forms a street. Apart from the main village, and usually below it or on either side, are the Doms' quarters or *Dumáná* and the cowsheds (*gaushálá*.) The Doms have never been permitted to build their houses amongst those of the higher castes, and their dwellings are usually at some distance apart, and away from the village water-supply. Not only are they not allowed to use the water-supply common to the rest of the village, but water brought through the *Dumáná* is considered polluted and unfit for drinking. Water wherever plentiful is drawn from a spring provided with a stone spout (*dhárá*) which effectually prevents all contamination. Where water is scarce, the spring is built round into a cistern in which the water is allowed to collect. In such cases contamination is common, but this device is never resorted to unless rendered compulsory by scarcity of water. The same care has not until recently been exercised in the segregation of cattle. These were kept in the lower storey of the house (*obrá*—Kumáyuni and Manjukumáyuni, *goth*) where the houses were two-storied, or otherwise in one of the rooms of the house, and the consequent insanitary state of the villages is frequently remarked on in the older reports. Now, however, the cowsheds are with few exceptions a regular part of each village throughout Garhwál, while the people are beginning to learn the rudiments of village sanitation. A great deal, however, remains to be done in the northern half of the district, where the people are wilder and more barbarous than in the south.

The houses are of various shapes and sizes, known by different names. The one-storied thatched house (*ikhárá makán* or *bhwímandá makán* or *bhayárá makán*) is almost extinct as a dwelling place. In the south it is not even usually dignified by the

name of a house, but is termed a hut (*jhoprá*). It is now thought rather a poor lodging for cattle. Single-storied houses roofed with slates are, however, still built where the owner is poor, or in cases where, as in Chordá in Sili Chándpur, the astrologers have declared the building of two-storied houses unlucky to the village on the opposite hill. The plain two-storied house or *makán* proper or *dopurá makán*, as it is sometimes called, has usually four rooms, two on the ground floor (*obrá*) and two in the upper storey (*pándá*.) Each room has a separate door in the front side of the house, and the upper doors are reached by a stone staircase built up outside. The dimensions of the house are usually about 15 by 25 or 30 ft. The *dandyálá* is an improvement on the *makán*. Its characteristic is a verandah in the upper storey, with a number of wooden posts (*dandá*) arranged along it to support the roof. Behind the verandah, which is about five feet wide, there are two rooms as in the *makán*, and about the same size as in that description of house, so that a *dandyálá* is wider by the breadth of the verandah. In the lower storey the extra space serves to increase the size of the two lower rooms, the front walls of which are brought right forward underneath the verandah. The staircase leading up to the upper storey is approached by a door in the front of the house, and lies inside the building. The advantage of the verandah, which serves as a sitting room, smoking room, and on hot summer nights as a sleeping room, are so great that in many cases *makáns* have been turned into a species of *dandyálá* house by building up a verandah on pillars placed in front of the lower storey. The roof is then brought forward over the verandah, the space below which is called the *dandyálá máre*. The *ewán* is of the same dimensions on the ground floor as the *dandyálá*—about 20 feet by 30 feet. In some cases it differs only from the *dandyálá* by having the verandah built in on all sides with the exception of a space in the middle about 5 feet wide and reaching from the floor to the roof. But the more usual form consists of two rooms on the ground floor as in the *dandyálá*, while in the upper storey the front wall is brought forward over the lower front wall. The space in the upper storey is then divided into three parts. The two end spaces are built up into rooms, while the middle space is left open in front and forms an open verandah. The *tibári* as its name implies is essentially a building with a treble window. This is done by fitting up a small open verandah such as exists in the *ewán* with four pillars (*khambh*) of highly ornamental carved woodwork, two being at either end and the remaining two trisecting the space between them. Circular arches of similar carved woodwork spring from the tops of the pillars over the three windows thus formed. The pillars are made of *tán* or other dark coloured wood, and the carving evinces considerable skill and ingenuity in the workman. This man is usually employed without limit to time at a daily wage of six or eight annas in addition to his food, and as a single pillar will take a good workman one month, the cost is considerable. The old *tibáris* are almost all the property of thokdárs and men of a similar class, who could command a large quantity of free labour, and are of all shapes and sizes. At the present date, as one old man confided to me, there is a regular craze for building *tibáris*, but it is "*totá ká kám*"—an unprofitable business. The usual form is a foundation about 20 feet by 50 feet, and thus considerably larger than any other form of house, with three rooms on the ground floor, which are reached by one or at the most two doors, the side posts of which are carved similarly to the *tibári* pillars. The upper storey as in the *ewán* is divided into three, the middle for the *tibári* or verandah, and the two side ones for rooms. On account, however, of the greater width of the house, the *tibári* verandah only extends back as far as the ridge pole, *i.e.*, half the width of the house, and behind it is another small room.

Cultivation.

17. Around the village and usually below it, lies the cultivation. This is by no means continuous, but confined to those parts of the hillside which are less steep than the rest. In no part of Garhwál does the cultivated area much exceed one half the total area, and it is usually very much less. The cultivation of each village usually lies about the hillside in patches and a patch belonging to one village will frequently be interspersed amongst patches belonging to another. Occasionally, as in parts of Chaundkot and Bárahsyún, cultivation in places extends almost continuously from the top

of the hill to the ravine. In other parts, as in Ghurdorsyún in Dewalgarh, cultivation is almost confined to the valleys, the upper hillsides being left untouched. It seldom happens that any part of the hillside is sufficiently level to admit of cultivation without terracing. This is done by building up stones into a wall at the lower part and excavating the upper part, until the whole becomes approximately level. As, however, the soil is very thin on most hillsides, the effect of carrying out the whole of this operation at once would be to bury the earth under the stones. The usual practice therefore, except where the soil is very thick, is to build up only a small wall and make a small excavation the first year, and allow the course of time to weather the lower rock into soil, while the operations of husbandry, ploughing and hoeing, combined with rain, operate to level the land gradually by conveying the soil from the upper to the lower part of the field. But as regards the greater part of the terraced land, comprising all the best of it, the Garhwáli is the inheritor of a bygone age. The broad fields with terrace walls ten feet high, which are found in most villages, were made hundreds of years ago, and even extensions of cultivation are now usually made in land which was terraced fields in the last century, and which bears the marks of terraces still. In the páttis round Chánpurgarhi there are miles of terraced land still waste and covered with pine forests.

There is a method of cultivating land without terracing it, which is then known as *katil* or *khil*. The shrubs and bushes on it are cut and burnt, and the land dug up with a hoe. After cropping it is allowed to lie fallow for a number of years, till the bushes have grown up again, when the treatment is repeated. As will be subsequently pointed out, a regular and fixed rotation is followed in every case, and there is no "abandonment" as is sometimes asserted, nor is the cultivation in any sense "temporary." In the south this system of cultivation is only practised on the very steepest hillsides, where the plough cannot be used. Some are, in fact, so steep that one wonders how men can work on them. The northern *katil* is usually made on a gently sloping hillside, and this is particularly the case in Dhajyuli and Choprákot, where alone the amount of *katil* cultivation is considerable.

18. In the greater part of the district there are, as in the plains, two harvests in the year. One takes place in September and one in April. The principal crops reaped in the former are rice, *mandwá* (*eleusine coracana*) and *jhangorá* (*opbismenus frumentaceus*) or *sawdín*. Others less important are *kauni* (*panicum italicum*), *chuí* (*amaranthus*), sesamum (*tíl*), *chína* (*panicum miliaceum*), the various species of pea, *wrd*, *gahat* and *bhat*, pepper, ginger and turmeric, and sugarcane. The last three, though rains or *kkarif* crops, are not reaped till three or four months later. The winter crops are wheat, barley and mustard with occasionally a little *másúr* or some similar pulse sown amongst the wheat. In the more rigorous northern climate, however, the spring harvest becomes later and later as greater altitudes are reached. Thus at about 6,000 feet the spring harvest does not ripen till May, at 7,000 feet till June, at 8,000 feet it ripens during July and at Aunli above Joshimath, which is nearly 9,000 feet, it ripens during August. Here the crop is on the ground practically the whole year round, as in England. In the villages in the higher part of the Niti Pass, which are snowed up during the winter, and whose altitude varies from about 9,000 feet to 11,000 feet, it is not therefore strange that the spring crops instead of being sown in the autumn, to be reaped about the same time next year, are sown in the spring and reaped in the autumn, along with such of the ordinary autumn crops as will grow, as the ground being under snow the whole of the winter, the seed could not benefit by being left in the soil during that season.

Crops, seed, time and harvest.

The seed time varies like the harvest time, according to the warmth of the part where the crop is produced. The ordinary seed time for the autumn crop is April for the earlier and May for the later, and for the spring crops early November. But in the Bhábar and hot valleys in the south of the district, such as the Jhart valley of Painon, it is unnecessary, by sowing the autumn crops so early, to expose them to possible injury during the hot weather. They are therefore sown with the beginning of

the rains in June. In the Jhart valley of Painon rice will sometimes remain on the land till November. Both in the Bhábar and in the highest villages of Badhán and Dasauli (7,000 to 8,000 feet) mustard is a winter crop instead of a spring crop, being reaped in December. In the Bhábar it is sown in October, in the upper villages of Badhán and Dasauli in August. In the Bhábar it is not unusual to sow after mustard a crop of *ganára* (*p. nicum uliginosum*) somewhat like the *china* of the hills, which is cut with the wheat in April; and is thus a spring instead of an autumn crop. In the upper villages of Malla Painkhanda, where the snow only melts in May, all crops are sown in the beginning of June.

Crop rotations.

19. The value of crop rotations, in retarding the exhaustion of the soil, is a fact so familiar to agriculture that, as might have been supposed, it has not been overlooked by the hillman, whose methods are the evolved result of many centuries of experience. In any land from which two harvests are gathered in the year, some sort of rotation is a matter of necessity, as the same crop cannot be grown on both occasions. But in Garhwál a simple rotation on these lines is not practicable, from the fact that in most land the early autumn crops have to be sown before the spring crops are ripe. Hence the standard two-year rotation of the hills mentioned by Mr. Traill (page 26 of the "Statistical Sketch") of rice, wheat and *mandwá*. Rice is sown in April and reaped in September. It is followed by wheat sown in October and reaped in April. Then *mandwá* is sown and reaped in October, after which the land remains fallow till next April. For the purpose of this rotation the village lands are divided into two parts. Rice is grown in half and *mandwá* in the other half. The half in which rice is sown is known as the *satyára* (Garhwáli, *sáti*—rice), that in which *mandwá* is sown is known as the *kodára* (Garhwáli, *kodá*—*mandwá*). In the winter the *kodára* is left fallow, while in the *satyára* wheat is sown, and this portion then becomes known as the *gyánwára* (*gyán*—*gehun*, wheat), and subsequently when *mandwá* follows the wheat it becomes the *kodára*, while the *kodára* of last year becomes the *satyára*. The system of leaving fallow a whole block of land instead of scattered fields here and there, has its advantages when the cattle are turned loose to graze on the remnants of the straw; and the grass that can be found on the terrace walls. For this reason half or nearly half the village will be found apparently lying waste in the winter. In land which is too stony to grow rice or too light to grow wheat, *jhangorá* is substituted for the one, or barley for the other, or both; but this does not affect the system of rotation, nor the method of carrying it out.

The above rotation is, however, practically confined to unirrigated land or land in which the irrigation is very poor. The irrigated land, lying as it usually does at the bottom of a valley, is as a rule the warmest in the village. Moreover, there is no risk in the rice being somewhat late, as it is protected by the irrigation against any damage which might be done to late dry rice by an early cessation of the rains. The rice harvest begins at the top of the hills and goes down to the bottom, whereas the spring harvest proceeds in the opposite order. For these reasons in irrigated land it is always possible to grow two crops, one of rice and one of wheat, in the year; and as the rice is a deep-rooted crop and the wheat a short-rooted, while the process of irrigation in itself constitutes a dressing of the land, this rotation leaves little to be desired. However, the wheat crop in the cold weather, besides being poorer than in corresponding unirrigated land (the native explanation of this is that the soil is too damp and cold), has a prejudicial effect on the quality and yield of rice, and is therefore not infrequently omitted altogether. This same rotation of rice and wheat is carried out in dry land in the Jhart valley of Painon. A similar double rotation is carried on in dry land in the hotter parts of the Alaknandá valley. There *jhangora* and wheat are alternately grown without any interval of fallow, wherever a good clay soil is available.

Another two-crop rotation is that of *chuwá* and barley. This is much practised in the northern villages in fields near the homestead which are regularly enriched with manure. In the south there is a similar rotation with *ugal* (*Fagopyrum esculentum*), buckwheat, for *chuwá*, but confined to outlying land. *Ugal* is said to have the

merit of not being injured by the mists which in the rains settle on the tops of all hills south of the Khátli-Utain range. In the higher villages of the north where barley does not ripen till May and June, the double crop becomes impossible, and the rotation then practised is *chuí* (April to September), followed by barley (October to June), followed by mustard (August to December). The land then remains fallow till April when *chuí* is again sown. But the people of those villages are shepherds rather than agriculturists by profession, and the rotation is not always practised.

The standard rotation for outlying land which is too far from the village to be manured in the ordinary way is as follows:—Wheat or barley is sown in the autumn and reaped in the following spring. Curiously enough, if the ground is stony and uneven, wheat is chosen, if level and good, barley, as wheat is said to thrive under more disadvantageous circumstances than barley. It is followed immediately by a crop of *mandvá*. After this is cut, the field is allowed to remain fallow during the winter, and next summer a crop of *jhangora* is raised. The land then remains fallow for a period of three years, when the process is repeated. The whole rotation thus occupies five years. The name applied to this rotation or rather the land on which it is exercised is *tisálá*. The rotation is practised irrespectively on terraced or unterraced land, though usually on the former. The vegetation which springs up during the three years' fallow is sometimes burnt and sometimes ploughed in. The rotation is sometimes lengthened by adding *gahat* or *ugal* in the third year and prolonging the fallow to 6 years, or nine years in all. This variation is practically confined to unterraced land and *katil*. The length of fallow allows time to the bushes to put forth considerable shoots, which when cut and burnt form such a valuable top-dressing for the land. *Tisálá*, or intermittent cultivation on terraced land, is practically confined to the south of the district, though in the north as elsewhere such unterraced cultivation as exists (*khil*) is treated with periods of fallow.

A favourite rotation in Talla Dhángú, where *katil* cultivation abounds, is one of *til* (*sesamum*) followed next year by *jhangora* and three years' fallow. It is said, however, that this rotation is hardly profitable except in newly broken land.

In the Bhábar, in order to bring in the autumn crop of mustard as well as wheat, a very long rotation is employed. Rice and wheat follow one another as in the hills, next rains however maize is sown instead of rice. This ripens in 60 days and after it is cut mustard is put in. This is reaped in December and followed by *ganárá*, reaped in April, making five crops in two years. It is seldom, however, that the whole area is sown with either maize or *ganárá*. The former diminishes the yield of mustard, while for the latter, water is usually deficient.

In the eastern villages of the Bhábar rice is hardly grown at all, tobacco and cotton being the favourite crops. When the land on and near which a cattle station has stood is first ploughed up, crops of tobacco and maize are alternately grown for about three years. Thereafter when the soil becomes exhausted, crops of wheat and cotton are raised. When water is available for irrigation, wheat can be sown after the cotton is reaped, otherwise after the cotton crop the land is left fallow till the next wheat sowing, *i.e.*, for about ten months.

20. Irrigation is carried on by means of minute cauals (*gál*) which are taken out from the stream (found at the bottom of almost every valley) at some convenient spot, and led along the hillside till the land to be irrigated is reached. The length of the *gál* of course varies according to the height of the land to be irrigated above the bottom of the valley, and the more or less rapid fall in the stream. As the rapidity of the fall varies, generally speaking, inversely as the quantity of water in the stream, it will be seen that in the case of a large river the canal must be made much longer to reach a spot a given distance above the valley than in the case of a small stream. As the amount of land in any given spot which could be irrigated by one canal is, moreover, generally comparatively small, there is no object in taking water from a large river. To take an extreme case of the above principle, there is no land whatever in the Garhwál district irrigated from the Alaknandá or Ganges, and there are very few canals

Irrigation.

from the Nayár. A further objection to irrigation from large streams is that owing to the difference between their flood level and low water level, a canal has to be taken for a considerable distance in the earlier part of its course below flood level, and as huge boulders are brought down by the river in flood, the result is that this portion of the canal is frequently entirely destroyed, even when cut out of the solid rock. An instance in point is the canal to Jaikot in Kolágár, taken out of the Nayár river. The favourite stream for irrigation is one about ten miles in length, issuing if possible from high hills. This will contain a supply of water sufficient for the land commanded, and at the same time the fall will be sufficiently rapid to admit of a short canal. Panáí in Dhanpur, Pharúsú in Chalansyún, Paitbáni in Pindarpár are instances. To direct the water into the canal, a dam (*band*) is erected across the stream. As the channel of the stream is scoured deeper and deeper by the annual rains it becomes necessary to make the *band* higher in order to raise the water to the level of the canal, and finally the head works may have to be shifted higher up the stream, or as an alternative the irrigation is abandoned. Where the head works are situated in level land the trend given to the stream by the dam, especially to the torrents which pour down at the beginning of the rains, frequently causes great damage by erosion of the banks, or, by pouring down the canal, flooding the land and washing away the top soil. Small *gáls* are sometimes taken along precipitous rocks in wooden troughs (*patnála*) formed out of the trunks of *chír* trees. The same plan is adopted when torrent beds have to be crossed. The quantity of water which can be transmitted by these troughs is not, however, very considerable. Land is watered by the flow only. Irrigation by lift is entirely unknown, nor are any mechanical methods of raising water practised.

The amount of water in a stream or canal is estimated according to the number of water mills it is capable of turning. "*Do gharát ká páni*" means "a two-mill power flow" or about three cubic feet per foot per second. For mills, *gáls* of the same description as irrigation *gáls* are used. The wheel revolves in a horizontal plane, and the movement is communicated through the vertical shaft direct to the stone, through a hole in the floor of the mill. The water is guided on to the wheel, which is about three feet in diameter, by a wooden trough arranged at an angle of about 45° with the vertical (*panyála*), and the water is turned off or on by placing a board (*kultorá*) in front of the trough or waste channel respectively. The latter guides the water down to the river or to another mill, as the case may be. The owner of the mill takes a percentage of one *pátha* in the *don* of the flour, or one-sixteenth part. Out of these dues a small sum varying from 0-8-0 to Rs. 2 yearly is taken by Government, while the rest is the owner's profit and provides for the maintenance and repair of the mills. Sometimes a mill is erected as a charitable act. No dues are then taken on it, and it is known as a *dharm gharát*. Such mills are revenue-free. They are repaired by the erector, or, in default, by the village community using them.

In some of the eastern Bhabár villages, *e.g.*, Kothirau, water is raised by the Bijnor people who cultivate them, by the method familiar in the plains, of a vessel dipping at the end of a weighted lever. Where even this is impracticable, tobacco plants are watered during the earlier stages of their growth by means of *gharás* of water brought up from the stream.

Methods of cultivation.

21. To prepare the ground for seed it is first of all ploughed (*bána*) once in the case of coarse *kharíf* crops, such as *jangorá* and *mandwá*, and twice in the case of others. The second ploughing is known as *ukhalno* in the Saláni or southern dialect, and *dunyáno* in the Ráthi or central. In the case of rice, and sometimes wheat, the clods are broken up after each ploughing by an instrument like a mallet with a long handle known as a *dilára*. The ground is also smoothed over by an instrument like a harrow without teeth known as the *jol*. The seed is then sown by a skilful man, and the ground is ploughed a second or third time as the case may be (*bátna*). The *jol* is then finally taken over the field again, this time very carefully to leave it quite even. When the *kharíf* crops have reached the height of a few inches from the ground the harrow (*dandála*) is applied. In Nágpur and the north, where this instrument is fitted with iron teeth, it is known as *mayá*. In the case of *mandwá*, *jangorá* and the coarsest

crops, the harrow is applied a second time, in the case of rice, only once. Then until the crop begins to come into ear it is regularly weeded (*malso gárno*—Rathi; *godno*—Salani) with the hoe (*kátti* or *káti*). The *rabi* crop is neither harrowed nor weeded, except in the case of heavy rain occurring in a clay soil after the grain has germinated, when the land is harrowed sometimes to let up the shoots. This process is known as *pál gárno* or *darak gárno*. The crop is cut with a sickle (*dáthi*; Kumáyun—*daráti*), rice being cut off close to the root, while in the case of *jhangorá* or *mandwá* the ears only are first cut, and after the stalks (*jhangret* and *nalyau*) have dried, they are cut and stored as fodder. Wheat and barley are cut about the middle. On arrival of the sheaves at the threshing-floor the ears are chopped off for threshing, while the stalk is given to the cattle. In ordinary years what remains on the field is grazed off by cattle or even burnt. When grass is scarce, it is, however, carefully cut and preserved for fodder. All such straw is stacked in trees near the homestead, or in the absence of these on poles known as *taila*. Rice is not taken to the threshing-floor but the paddy (*dhán*) is separated from the stalks (*mándno*) on the spot. It is usually left on the field three days after being cut, and then spread in sheaves on a matting of ringal (*moti*) or of wheat straw (*mándura*). The grain is then pressed out by the feet, the remaining straw being known as *parál*.

Threshing-floors are usually constructed on a ridge, where a good current of air may be anticipated. They are commonly paved with stone flags. The grain is trodden out by oxen in the usual way and winnowed by pouring it out of a basket held high up on to a mat below. The grain is then stored in big baskets (Saláni—*kunná*; Rathi—*dorá*) in the upper storey of the house (*pándá*) till required for use. Rice is husked (*kátná*) when required for use, by pounding it in a sort of stone mortar (*urkhyálá*) hollowed out of the floor of the courtyard, with a stick about three inches in diameter and five feet long, narrow in the middle where it is grasped, and bound at the end with iron rings, known as a *ginjyálá*. If required for sale, rice is at once husked instead of being stored as paddy.

In irrigated land, rice, instead of being dealt with as above, is usually sown in a seed bed (*bijwár*). At the beginning of the rains after the young plants (*paund*) have attained a height of about 6 inches they are planted out in the remaining irrigated land. All the finer kinds of rice are produced by this method, which has besides the advantage of rendering as valuable as perennially irrigated land, land for which no water is available during the hot weather. About one-tenth of the area which it is intended to plant up is sufficient for a nursery. Pepper (chillies) is similarly dealt with. In most of Talla Salán a similar plan is followed with regard to *mandwá*. It is sown very thickly in one field, and when the plants come up they are transplanted to the adjoining fields. This operation is carried out at the beginning of the rains, but neither the nursery nor the other fields are in this case irrigated. In the rest of the district for *mandwá*, and for the whole district as regards *jhangorá*, all that is done in the way of transplanting is to fill up the barer parts of the field by putting in seedlings taken from the more thickly sown part, so that the crop may be even over all.

22. Manure is usually applied to the ground immediately before the seed is sown. It is then ploughed in with the seed. In the case of *mandwá*, and sometimes in the case of wheat, manure is scattered over the ground after the crop has germinated instead of before sowing. *Gahat* is not manured at all, and is usually sown in the stoniest fields in the village. To say of a field "*Is men gahat bhí na hotá*" means that it is something very bad indeed. *Ugal* is also not usually manured. Farnyard manure, in the old days when cattle were kept in the lower storey, was usually stacked in heaps just outside the dwelling houses. Now that the cowsheds are a separate part of the village, it is stored in heaps near them till required for use. Intermittent cultivation, known generally as *tisála*, gets only the dressing of weeds, which are cut down, rot, and are ploughed in. In *katil* the shrubs are cut and burnt, and the same procedure is sometimes observed in terraced *tisála*. Leaf manure is largely, and it is said increasingly, used throughout Garhwál. Oak leaves are preferred; pine leaves are not only useless,

Manuring.

but noxious. It is to be noted that the irrigated land known as *sera* is considered not to require manure, the silt brought down by streams in flood affording the necessary top-dressing. In the greater part of the Saláns and Chaundkot, and to some extent in Bárahsyún, Dewalgarh and Chándpur, it is the custom to pen the cattle in the fields to manure them. For this purpose a species of thatched hurdle about eight feet by five feet is used. These are known as *pallá* or *pharká*. The outer framework is of *chír* wood and the thatch is kept in place by thin strips of bamboo. In the southern and warmer pattis, where broadleaved trees are to be found, a layer of leaves is usually placed between two thin layers of thatching grass. A wooden handle is arranged in the middle of the *pallá* by which it is lifted and carried. A shed is formed by placing a number of these side by side in a horizontal position, their upper edges resting on the terrace wall of a field and their lower edges being supported by upright sticks. In this the cattle are placed at night the men sleeping round it outside to keep off leopards. During the day the *pallás* are removed. The animals are usually taken out to graze part of the day and penned up in the fields for the rest. Cows with young calves, however, are kept in the field all day and stalled with grass. These pens are known by the name of *goth*. In the Bhábar *goth* has a different meaning. It consists of a huge cattleshed, made with a frame work of wooden poles and covered with thatch, sometimes as much as a hundred yards in length and twenty or thirty broad, in which the cattle brought down to graze in the forests are lodged at night. Men who bring down cattle and pay the grazing dues to the Forest Department are allowed, free of charge, to cut the necessary poles every third year. In the eastern villages of the Bhábar, such cattle owners take leases of the villages. Each then erects his *goth* in one part or other of his village. The land on which it stands and the immediate surroundings are perforce left waste during this time, but the manure from the cattlesheds is thrown out on to the adjoining land. On the expiration of three years, the *goth* is dismantled, removed to another part of the village, and the land on which it stood brought under cultivation. The cattle owning lessee sublets the land to cultivators, and thus makes good his rent.

Protection against wild
beasts.

23. As a rule, the villagers take no particular precaution to defend their crops against wild beasts, deer not being usually sufficiently numerous to be capable of doing serious damage. In the parts of Búngi and Painon, however, which are interspersed with or adjoin reserved forest, a small platform is erected on wooden poles about ten feet above the ground, and roofed over to protect the occupant from rain. These are placed in all parts of the village lands, and a watcher has always to be stationed there to prevent deer destroying the crop. The name given here is *tánd*. In the Bhábar and parts of Síla and Talla Badalpur as well as in Malla Kálipháat and Maikhandá similar erections are used, but known as *orá*. Another device used in Búngi and Painon is to tie a string across the field a short distance above the top of the crop, and fixed to two sticks. However fragile this thing may be and however loosely tied, the deer will not venture near it. Sometimes pieces of tin are tied near the stick on either side, which, as they are blown about by the wind, frighten animals by their noise. The bear, who has a great fondness for *mandwá*, is occasionally kept away by keeping up a smouldering fire of *mandwá* husks in the field. When, however, a bear gets really troublesome, some one will sit up for him with a gun, and perform the not very difficult task of ending his career when he comes for his evening meal. Monkeys are exceedingly destructive, and the hillman, though without the same reverence for monkey life as his brother of the plains, is loth to shoot them. This, however, is occasionally done, and is in fact the only remedy, as dogs tied in the fields are invariably carried off by leopards. As regards deer in places other than those noted, the Garhwáli usually prefers to carry the war into the enemy's country, by shooting them in the forests before they have begun to attack his fields. Leopards are always very destructive to cattle, and will not infrequently break open the roof of a cattleshed in order to get inside. The people are, except when a leopard becomes very destructive, afraid to attack him with guns, and traps are usually resorted to, and with fair success.

Outturn of crops.

24. The outturn of the principal crops has been a very important matter in the present settlement, because the whole assessment is theoretically based thereon. The

experiments which have of recent years been made regarding the outturn of crops appear to have established this fact rather than any other, that in the hills, within very wide limits, the crop depends almost entirely on the amount of manure put into the ground, and Mr. Richards, a tea planter of Lohba, with forty years' experience of Garhwál, is of opinion that the native belief in the decreased fertility of the land is correct, and due to the substitution of leaf for farmyard manure. The cattle instead of being grazed over the fields as formerly are more and more taken off to the forests, where such exist. The old proverb asserted of certain pieces of land in Bachhansyún patti :—

Sewá, Silsir, Launda, Gadsár,

Chaupathá bútké upje khár,

or a return of eighty-fold. Twenty or thirty-fold is now considered a good return. But it may be expected that when the Garhwáli, on the introduction of the British rule, began to till again the broad fields deserted during the Gurkha occupation (and it was always the fairest and best lands of the valley, which, exposed as they were to the depredations of every passing body of soldiery, were first abandoned), phenomenal crops were the result. Now, however, the land returns only so much as is put into it, and in the present day the effort seems to be after quantity of cultivation instead of quality. The old method of estimating the outturn was as elsewhere, not by reckoning the produce of a given area of land, but the produce of a given quantity of seed sown. Even at the present day it is very difficult to get the cultivator to reckon by the former method. The names given to areas of land are derived from the amount of seed they were supposed to contain. Thus a *náli* contained one *náli* (Kumáyuni) or *pátha* (Garhwáli) of grain, and its area naturally varied according to the crop sown. The present standard *náli* of 240 square yards is the area in which a *náli* of wheat is sown. Similarly the *bíst* contained twenty *nális* of seed. Large quantities of grain are usually reckoned by the *don* (Kumáyuni and Manj-kumáyuni—*pirei*) of sixteen *páthas* and still larger quantities by the *khár* of twenty *dons*. In Garhwál land was formerly measured by the *jyúlá* or plough, containing from four to sixteen *dons*, on the British conquest a standard *jyúlá* of eight *dons* being adopted. The *pátha* like the *ser* is primarily a measure of capacity not of weight, and varies in different places. A grain-dealer usually has two *pátha* measures, a large one to buy with and a small one to sell with. Generally speaking, a *pátha* is about sixty ounces. A fourth part of a *pátha* is called a *mána*.

The following table gives the approximate outturn and value of the principal crops on an acre of good land. Turmeric and ginger are never grown in plots of an acre in extent and pepper hardly ever, so that the figures only give the calculated outturn found by taking the produce of a smaller area :—

			lbs. per acre.	Value. Rs.
Rice	...	...	1,000	25 to 50 according to quality.
Wheat	...	...	800	25
Barley	...	...	1,000	25
Mustard	...	...	800	25
Mandwá	...	...	1,000	20
Jhangorá	...	...	1,000	20
Pepper	...	...	800 to 1,200	100 to Rs. 200 according to quality.
Turmeric (dried)	...	...	1,000 to 1,500	100 to „ 150.
Ginger (undried)	...	...	3,000 to 4,000	100 to „ 200.

25. But the people of Garhwál are no less pastoral than agricultural, and in parts of the north the former is their predominant character. Thus at last settlement it is noted that Harmal in Pindarpár is a *bher ka mulk* (sheep country) while Jbaliyá in the same patti is a *bakriyon ka gáon* (goat village), and they were assessed accordingly, irrespective of the state of cultivation in these villages. The pastoral habits of the people no doubt account largely for the opposition that almost invariably follows the breaking up of new land for cultivation, and for the lying waste of large stretches of good culturable land for grazing purposes, of which the “*Gauchar*” of Panai in Dhanpur is the most famous example. It also accounts for the firing of the forest that

Cattle.

takes place annually in the spring, and which is carried out with the idea of burning up the old grass and pine needles and causing the young grass to spring up with the first rain. Sometimes, however, as in the present year, these fires are not followed by rain, and the result is a great scarcity of fodder. In the south of the country, particularly in Malla and Talla Saláns and Chaundkot, where pasture is comparatively scarce, certain trees are grown and preserved for fodder. Of these the commonest and most prized is the *bhyúl*. These are grown along the terraces of fields, and sometimes the whole cultivation of a village will be found almost covered with them. The branches begin to be cut for fodder in November and last till the hot weather, only a few being then left to keep the tree alive. During the rains fresh branches are formed, which are cut in the succeeding cold weather. The branches themselves when the leaves have been eaten off are, after being steeped in water, peeled of their bark, which, as in the case of the hemp plant, is then used for ropes. Where grown, this tree is much appreciated, but in the parts where it is not used its introduction is objected to on the ground of the damage done to crops by its shade, and by reason of its affording a resting place to birds. The *osín*, a large-leaved tree, is grown in fields to some extent on the southern slopes of Talla Salán, in the warmer villages. *Kimú* (mulberry) is also cultivated for fodder. So too the *kwíral*, but it is not grown in fields. Oak leaves (*báni*) are also largely cut, particularly for goats, and considerable damage is often done to forests in this manner. In the hot weather when grass is scarce, the leaves of all sorts of trees are used as fodder.

As a rule, no attempt is made to preserve grass for fodder, either by cutting and storing it or by preserving it from grazing. In the upper part of Bichla Nágpur known as Dasjyúlá, both methods are however practised. After the rains the cattle are taken up into the higher hills, which ascend to about 10,000 feet, while the grass round the village is carefully preserved. In October some of this is cut and stored for the winter, and in the middle of November when snowstorms are liable to become dangerous on the upper hills, the cattle are turned loose to graze in the preserves near the village. In upper Dasauli a similar practice is followed. In the north of Malla Salán, grass is occasionally cut for hay and stacked on poles near the village like straw. No very elaborate arrangements are usually made for preserving the grass, it being cut from precipices or field terraces where the cattle cannot reach it. The use of the straw of different grains for fodder has been referred to in § 21.

Wherever there are high hills, it is usual at the beginning of the hot weather to take the cattle of the village thither and form a summer cattle station (*kharik*). A *gwár* or *marwára*, on the other hand, is a permanent cattle station where the animals remain all the year round. The Bhábar *goth* (also known as *khatá*) has been alluded to in § 22, as well as the institution of a similar name in the hills. In the extreme north, the grassy expanses situated between the upper limit of the forest and the region of perpetual snow, known as *bugyál* or *payár*, are the summer grazing grounds of the whole body of cattle belonging to the villages in the vicinity. Near Wán there is a celebrated *payár* named Baidani, whither in the summer ponies are brought to graze from miles around. The Wán people used to levy a tax of one rupee per animal on these in return for tending them to some slight extent, and giving them a little salt occasionally. This custom is said to have been now broken down, the owners of the horses sending their own men to look after them. Badrináth is another famous *payár*. Ponies are brought from as far off as Srinagar and turned loose for the summer, to the great indignation of the Mára people, whose crops are made havoc of by these animals. Elsewhere, however, it is sheep and goats that are chiefly bred on these pastures.

The cattle of Garhwál are usually remarkably small sized, a fact which constitutes in reality an adaptation to the nature of the country, as a larger animal would prove unwieldy. But in Chaundkot the cattle are comparatively large, as the people of that pargana do a considerable trade in them, buying animals from Kumaun and Tehri and selling them in the Bhábar. The Chaundkot cattle are rather favoured in the plains, on account of the superior activity which they attain in grazing over the hills, while

bullocks that can plough up and down the small hill fields are said to be fit for carts without further training. The hill cow is a very poor milker, from half a seer to a seer a day being the usual quantity given. Goats in the hills are not milked at all. They are kept for purposes of food, and to enrich the land, it being said that no man with a large flock of goats ever has poor crops. In the north they are, along with sheep, used as beasts of burden. For milch purposes the buffalo is kept, and does very well in the hills, notwithstanding its bulk. Dúdatoli Forest in Chánpur is much resorted to in summer by Gujars from the plains as well as by the Kumaonis with herds of buffalos. Buffalos are to be found in every part of Garhwál except the north of Malla Painkhanda.

26. Of the trade of the district, probably the most important branch is that known as the Tibetan trade. The principals of this are the Bhotiyás of Painkhanda, who alone are permitted by the Tibetans to cross the borders. The chief articles of import are salt, wool, sheep and goats, ponies and borax, which are paid for by exports of grain, cloth and cash. The merchandise is carried on packanimals or by the Bhotiyás themselves. For such articles as grain, salt, wool, which can be made up into small loads, sheep and goats are used. The grain, etc., is sewn up in a sort of packsaddle (*pháncha*) hanging on either side of the animal's back. For cloth the animals used are yaks (*chaunr gac*) or *jubas* (a cross between the yak and the cow) and asses. The latter animal is chiefly favoured by the Khámpas of Gurguti. Ponies are not usually used as packanimals, probably on account of the difficulty a laden pony would find in traversing the mere tracks which serve for roads in the passes. They are kept for riding over the sandy deserts of Tibet. The following statement compares the prices and loads of the different packanimals:—

Trades and manufactures.
The Tibetan trade.

					Price	Load.
<i>Juba</i> or Yak	...	...	...	...	Rs. 35	50 seers.
Ass	...	...	...	...	" 25	40 "
Goats	...	...	...	...	" 6	12 "
Sheep	...	...	...	...	" 4 or Rs. 5	10 "

Owing to snow the frontier is not usually passable before the end of June, and remains open till the middle of October, though snowstorms in that month sometimes overtake the traveller and cause great loss. The highest British villages in the passes, Niti and Mána, are thirty or forty miles from the frontier, while Dápá and Chilang, the marts most resorted to, are about the same distance from the watershed on the further side. The exchange of merchandise between British territory and Tibet thus takes place almost entirely during the months of July, August and September, and, as a rule, not more than three or four journeys are performed by each man during this time. Each Bhotiya's transactions are confined by custom to a single correspondent (*árhá*) in Tibet, and the latter is likewise not permitted to transact business except with his special Bhotiya correspondent. Any infraction of this custom is regarded with grave disapproval.

Though only the Bhotiyás are allowed to cross the frontier and trade direct with Tibet, every northern villager who can buy or borrow a flock of goats or sheep, trades between the Bhotiyá villages of Painkhanda and his own neighbourhood, and from July to November the passes (*gháta*) are thronged with these people and their flocks. Generally the people of western Nágpur, Malla Káliphát and Maikhandá buy grain in Tehri and transporting it to Niti and Mána, bring thence salt, which is again exchanged for grain in Tehri. In the north of Malla Nágpur and Urgan, the salt obtained from the Bhotiyás is taken to Chánpur, Dewalgarh and lower Dasauli and there exchanged for grain. The people of lower Painkhanda and upper Dasauli and Badhán take the salt to the lower villages in Dasauli, Badhán, and especially to Pindarwár patti, which appears to produce a considerable amount of surplus grain for which, owing to the absence of a good road down the Pindar valley to Karnprayág, there is no other outlet. The people of Nágpur Talla and Bichla who bring salt from the passes usually dispose of it in the neighbourhood of their own villages. Wheat and rice exchange in the passes weight for weight with salt. In the case of barley a premium of about Rs. 2 per maund is charged. In the villages, one measure of salt exchanges for two or three

measures of wheat or rice—the better price being obtainable by the man who brings his salt to market soonest, while if he cares to take a commodity which will not be accepted again by the Bhotiyás, he can get five or six measures of *manduá*. The profit is thus high, but taking account of the small bulk carried by sheep and goats and the labour involved in journeying to and from the passes, not to mention the interest on borrowed capital which must frequently be included, it cannot be said to be considerable.

In October, as the winter advances, the Bhotiyá begins to transport the remainder of his Tibetan merchandise to the south, and for this purpose he has depôts in the upper midland parganas. The principal ones in Garhwál are Nandprayág and Karnprayág, and in these encampments the families usually remain for the winter. On the way hither and on the further journey to the plains, excursions are usually made into the villages on either side of the route, which then purchase for grain or cash such salt and wool as they require. Finally the merchandise which has not been sold on the way, and which includes all the borax, reaches the plains at Kotdwára or Rámnagar, where it is sold for cash or exchanged for grain at advantageous rates. Two or three journeys are necessary at each stage in order to bring down the whole. During the winter and even till late in the hot weather the flocks of sheep and goats are used for carrying grain for *baniyas* and others to Srinagar and into the interior of Garhwál. This has been particularly the case of recent years, as, owing to scarcity, enormous quantities of grain have been imported to feed the population.

Trade with Jobár.

Besides the trade with the Garhwál passes, Niti and Mána, the people of Badbán, Kapiri, Karákot, Pindarwár and West Pindarpár and to a lesser extent the poorer people only of Malla Dasauli and Nandák, export mustard oil to Jobár and bring thence wool. As a rule, on this journey sheep and goats are not used, the loads being carried by the men themselves. The reason why Jobár is chosen for the purchase of wool instead of Niti, is said to be that inferior and cheaper wool is obtainable at the former place, while at the latter only the best shawl wool is available. The wool of eight sheep, estimated as the requirement for a blanket, is said to be sold for Re. 1 in Jobár and Rs. 3 in Niti.

The pilgrims.

27. The furnishing of supplies to the pilgrims who annually visit the shrine of Badrináth, though perhaps hardly to be called a trade, is deserving of notice as one of the main sources of income of the people. The pilgrim route enters Garhwál at Lachmanjhula on the Ganges, about twenty miles above Hardwár. It thence follows the valley pretty closely to Deoprayág, Srinagar and Rudraprayág. At this place pilgrims to Kedarnáth proceed up the Mandágni to Guptkáshi and Kedarnáth, returning down the valley to Ukhimath (opposite Guptkáshi), whence the road begins to ascend the Tunguáth range which traverses the middle of the Nágpur pargana, and crossing it close by the temple descends to the Alaknandá again at Chamoli or Hát. Meanwhile the pilgrim who proceeds direct to Badrináth journeys straight up the Alaknandá valley from Rudraprayág, through Karnprayág and Nandprayág to the same places. The road then proceeds to Joshimath and thence to Badrináth, still following the valley closely. On the return journey the valley is followed as far as Karnprayág, whence the road branches off to Adbadri and Lehba, near which place it leaves the district by the Panuákbál Pass to reach the plains by Dwáráhát, Bhim Tal and Kathgodám. Pilgrims from the Panjáb occasionally instead of following this route return down the valley to Srinagar and proceed thence across country to Kotdwára, or follow the river to Hardwár.

Throughout the whole length of this route shops kept by villagers or by professional *baniyas* are opened every year to furnish supplies to the pilgrims at the halting places (*chhatti*). As grain is sold at three or four seers to the rupee at Rudraprayág and places above, though somewhat cheaper in the lower parts, the profit must be enormous. In Nágpur and Talla Dhángú, the villagers have the trade pretty well in their own hands, but over the rest of the route the grain shops are kept for the most part by *baniyas* of Almora or Srinagar or by the Bráhmans of Sumári in Kathulsyún. The villagers frequently own the shops and then make a handsome profit from the rent which averages from Rs. 20 to Rs. 50. In Ghát Chatti of Pandukeshwar last year one shop was let for Rs. 80. At Badrináth itself the shops are the property of the *baniyas*. All along

the pilgrim route the wood, vegetables and fruit are supplied by the villagers. They sometimes also supply milk, but the trade in this article is mostly in the hands of the Sumári people, who own enormous herds of buffalos, which they take to different parts of the pilgrim route as soon as the season commences. Labour on the pilgrim route, either in carrying the pilgrims themselves, or their luggage, is also well remunerated.

28. The Bhábar trade, like the industries on the pilgrim route, comprises a series of occupations of more or less remunerative nature. The principal movement including representatives of almost every village in Garhwál consists of the annual journey to the markets at the foot of the hills to obtain the year's supply of sugar, cloth and, in the case of the southern villages, salt and iron. The northern villagers use the Bhotiyá salt. Those of the south despise this and use it only for cattle. The iron mines of the north almost entirely supply the needs of the population in this respect. A few villages in the neighbourhood of Pauri and Srinagar obtain their supplies from these markets. In the south, owing to the absence of baggage animals, the men are obliged to carry up their supplies on their backs. The people of each village usually go in one body, and they may be seen in a long line wending their way homeward with their burdens tied on their backs, taking always the shortest cut, whether it be straight up and straight down the side of a steep hill, quite irrespective of existing roads. In the north, including parts of Dewalgarh and Chándpur, Nágpur, Dasauli, Badhán and Painkhandá, the village flocks of sheep and goats with saddlebags on their backs are entrusted to one or two men, and these take the flocks to the Bhábar marts and there make purchases on behalf of the whole village. Throughout the district, sales of the commodities thus brought from the Bhábar are made to a limited extent in the villages of the interior whither they are taken, but in the main, imports are for personal and home consumption only. In times of scarcity this journey to the Bhábar includes the purchase and import of grain in addition to the other articles mentioned, and the one journey is expanded into several. Especially in the south where the flocks of carrier sheep and goats do not exist, the villagers will in a bad year be almost continually journeying to and fro, from the middle of the cold weather till the rains break. Making the annual journey to the Bhábar is known variously as *dhákar jána*, *mál jána*, *painna*, and the passes into the plains like those into Tibet are known by the term *ghátá*. The merchandise obtained in the Bhabar marts is generally paid for in cash. Villages of the south which can command sufficient pasturage usually, however, bring down their surplus stock of *ghí* to sell here, while the pattis of Malla Salán and the western ones of Talla Salán obtain not only the wherewithal to make these purchases, but frequently a surplus sufficient to pay the Government revenue, from the sale of chillies, ginger, and turmeric, especially the first, for which this part of Garhwál is famous. On this account the dates of the Government winter revenue instalments of these two parganas are fixed a month later than in the rest of Garhwál. Chillies are also grown by the people of the Tolyágár and Kunigár valleys of Lohba, and in Khansar patti, by a few villages of Choprákot and in the Nayár Valley of Dewalgarh, and brought down for sale in the winter. Grain is generally speaking not exported. On the contrary, a considerable quantity is imported yearly. The one exception, however, is *ugal* (buckwheat), which commands a high price in the Bhábar markets, and is sought after for use on fast days in the plains. The intelligent Garhwali is commonly accustomed to mix with his *ugal* a certain quantity of *kotu*, a similar grain, but without the sweetness of *ugal*. Another device is to steep in water the bag of *ugal* the night before it is taken to the *baniya* for sale.

The Bhábar trade.

Throughout the pattis adjoining the belt of reserved forest, which has been already mentioned (§ 11) as stretching across the entire south of the district, that is to say in the southern pattis of Malla Salán, including, however, Talain and Khátli, and the greater part of Talla and Ganga Salán, labour in the forests during the winter is a considerable source of income. The work takes the form of the annual repairs to roads, and the cutting of bamboos and timber. From each large family in each village one or more men go down to the Bhabar in October after the spring crop is sown, returning in March or April for the harvest. Four annas a day can be earned by cutting

bamboos, and the labour done on the roads for contractors, which receives about two and a half annas a day, is regarded as the least remunerative work. The money so earned serves to purchase grain and other commodities.

Other trade. Cattle.

29. The trade in cattle by the people of Chaundkot has been already mentioned. Cattle are also bred for sale in Chauthan, and sheep and goats by the people of upper Choprákot, and both to a small extent in the upper villages of Dewalgarh. On the higher hills of upper Badhán and Dasauli large quantities of sheep and goats are bred, but not sold to any considerable extent; the inhabitants requiring them for their carrying trade. In upper Nágpur in addition to the stock raised locally large importations of sheep and goats are made from Tehri.

Ghi.

The exportation of *ghi* to the Bhábar markets has been mentioned in the last section. In the north, Pipalkoti in Band patti is the great emporium for this article. It is resorted to by people of north-east Nágpur, Dasauli, north Badhán and Painkhanda. A large portion of the *ghi* eventually finds its way to Badrináth. In southern and western Nágpur and Dewalgarh the *ghi* which is not sold locally to the *baniyas* on the pilgrim route is taken to Srinagar for sale. In eastern Badhán the greater portion of the *ghi* finds its way into Kumaun at the Bageswar fair.

Blankets.

Thither are also brought blankets woven by the people of Pindarpár and Pindarwár, mostly from the wool imported from Johár. In Nágpur blankets are similarly taken to Srinagar for sale, and in all the sheep-rearing pattis some local trade is done in this article.

Honey.

In most of the higher villages throughout Garhwál, *i.e.*, above 5,000 feet, bees are kept. The honey is sold locally for one *timási a mána*—about two and a half *sérs* to the rupee. The best honey is gathered in the month of Kartik (October-November) and some very fine combs can then be obtained.

Wild bees.

Some income is derived from wild bees (*bhaur*) in the northern pattis, and formed a regular subject of taxation under the native kings, along with hawks and musk (*báz bina*). The wild bees build their combs on the face of a steep precipice. The comb is brought up by a man let down from the top by a rope attached to his waist. There are various ways of getting the bees to evacuate the hive. Sometimes they abandon them naturally after consuming the honey. In other cases a few handfuls of flour are thrown down from the top of the cliff, attracted by which the bees leave the comb. In other cases the man, whose limbs and face are first carefully covered with cloth, takes down with him some smouldering rags or green wood and smokes out the bees. The honey is very dark-coloured and practically uneatable. It is given to cattle and horses. The wax is melted down and sold locally, part being finally exported to the plains. A good comb (*phar*) contains half a *gágar* of honey and six to seven *sérs* of wax, sold at one *timási a mána* or two and a half *sérs* the rupee.

Money-lending.

Money lending is carried on in a small way in almost every patti in the district. The usual rate of interest is *sawáyá* or twenty-five per cent. besides discount (*ganth-khulái*, literally "pocket opening") at the time the loan is made. The most common form of usury is grain-lending on the *dyorhá* system, *i.e.*, the return of the grain lent plus fifty per cent. in kind at next harvest.

Shopkeeping.

In the interior, except along the pilgrim route and at Pauri and Lansdowne, shops are almost non-existent. Here and there, however, villagers are beginning to open shops for the sale of a little cloth and for limited supplies to travellers. The principal *bazárs* along the pilgrim route are at Báh (Deoprayág), Srinagar, Punár (Rudraprayág), Karnprayág, Nandprayág, Pipalkoti, Joshimath, Badrináth, Guptkásbi, Ukhimath, Kedarnáth and Dhunarghát (Lohba). Along the foot of the hills the principal are Kotdwára and Chaukigháta in Garhwál, but Rámnagar (in Naini Tal) is also resorted to as well as Kankhal and Hardwár in Saháranpur. A bi-weekly market is also held at Kálágarh. Dogadda, 8 miles into the interior of the hills from Kotdwára, may also be reckoned a Bhábar mart.

30. Of manufactures there are none of any importance. The copper and iron mines of Garhwál were once celebrated, but the difficulty of working with increased depth, and the cheapness of imported copper have long since closed the mines of both Dhanpur and Pokbri (Bichla Nágpur). A few iron mines are still worked and supply a sufficient material for the requirements of their immediate neighbourhood. The most important are Hát (Nágpur Malla), Mokh (Naudák and Simalkhet (Lohba). The copper-smiths (*tamota*) of the district are settled chiefly in Simkhet (Ghurdorsyún) and Srinagar. The people of the former village are all copper-smiths and go abroad throughout the district, returning after several years. Brass vessels are usually purchased from the Bhábar marts.

Manufactures. Mines.

Coppersmiths.

Potters (*pajáin*) are comparatively rare, owing no doubt to the more extensive use in the hills of the less fragile vessels of brass and copper. They are to be found, however, at Srinagar, Kánda (Aswálsyún), Ujyári (Gagwársyún), Kainyúr, Pajyána (Lohha), and Pajyána (Sílí Chándpur), besides a few other places. Low caste Muhammadans who manufacture glass bangles (*chúrí*) are to be found at Srinagar, Phaldá (Patwálsyún), Dhánai (Taili Chándpur), and a few other places. The glass is brought up in lumps from the plains and the hill industry is confined to melting it into shape and colouring it.

Pottery and glassware.

Leather workers who are also invariably their own tanners and dressers are somewhat more common. They are found in numbers at Srinagar, Dáng (Kháti) Gadoli (Lohba) Kaub (Pindarwár) Dungri (Pindarpár) Simli (Taili Chándpur) Sunali (Talla Dasauli) Biron (Talla Káliphát) and Nálá (Malla Káliphát) besides many villages in which there are only a few families. The caste name is *Báre* and they are said to be as aggrieved at the epithet "*chámár*" being applied to them as the dom who greets the Rajput with an obeisance and the words "*Simáná Thákuro*" is on being answered with the words "*Jitá raho.*"

Leather.

The home of the hemp plant in Garhwál may be said to be Chándpur, where the Khasiya non-thread-wearing castes known generally as *pabilás*, give their attention to the manipulation of the fibre which is elsewhere left to the doms. Hardly any part of the plant is without its uses. The flowers furnish *charas*, which adheres to the hands when rubbed over them and is scraped off with a knife, the seeds furnish oil, the leaves are smoked by *jogís*, the bark or skin of the plant furnishes the fibre, and the pith makes excellent torch wood. The fibre (*lámphá*) is woven into coarse canvas of great strength called *bhangelá* which is worn by the people of Chándpur generally and poorer people wherever hemp grows. There is some export of this cloth to the Bhábar marts. The fibre is also the best rope material that the hills furnish; the others commonly used being the green bark (*airu* or *syelu*) of the *málu*, *udála* and *bhyánl* trees, and the grass known as *bábar*; the last being the least strong. Hemp is now usually cultivated in rich plots of land adjoining the village, the former custom of sowing the crop in forest clearings having been discouraged on account of the damage done. A great deal of *charas* used to be taken to Rámnagar for sale, but this was discouraged by some prosecutions and confiscation under the excise laws. A small quantity continues to be sold to the local drug contractors, who, however, derive the greater part of their supply from the Panjab. Any arrangement which would encourage the cultivation and sale of this article would do much to bring back the vanished prosperity of the Chándpur pargana.

Hemp.

Matting and baskets are manufactured to some small extent in Badhán, Dasauli and Káliphát from the ringal bamboo and sold locally. The industry had formerly some importance in Chándpur, but, except in Lohba where the ringal is brought in from Badhán, it has almost died out, owing to the extermination of the ringal on Dúdatoli, due, it is said, to extensive cattle grazing.

Mats and baskets.

Another small industry is the manufacture of wooden vessels, which are turned out of a single block of wood. The lathe is driven by water-power in the same manner as flour mills. The industry is confined to the northern pattis, and flourishes chiefly in Káliphát and Maikhanda.

Turning.

- Hill paper.** The manufacture of hill paper is almost extinct in Garhwál. It lingers to a small extent in the upper part of the West Nayar valley in Kandársyún, Dhajjyúli and the adjoining portion of Chopríkot. Also in some of the upper villages of Pindarwár some small quantity is manufactured by doms only.
- Millstones.** In some villages of Kandársyún millstones are manufactured out of the rocks found in the bed of the Dhajjyúli *gadhera*. They are sold locally.
- Other sources of income.** 31. In almost all parts of the south of the district a great deal of money is earned by labouring in the neighbouring hill stations during the season. The men of Malla and Talla Salán, Chaundkot, Chándpur and Badhán go to Naini Tal as *jham-pánis* and coolies, while those of the west, Bárahsyún, Gangá Salán, Dewalgarh and South Nágpur betake themselves to Mussoorie. The tea plantations of Pindarwár and Lobba furnish employment to the villages surrounding them, and the wages which now average Rs. 2 and Rs. 3 for boys and Rs. 4 and Rs. 5 for men, show a tendency to rise. Government employment is another considerable source of income. The people of Garhwál, particularly the south, have no great dislike to service in the plains, and there are numbers in the Survey, in the Police and in the Public Works Departments, in various regiments, and in the military police of Burma. At Lansdowne there has been since 1887 a whole regiment recruited exclusively from Garhwáhs.
- Grain not generally sold.** Grain is not generally sold in Garhwál. As the produce is insufficient to feed the inhabitants, while the mass of the people are agriculturalists, it is impossible that this could be the case to any large extent. The revenue is usually paid from one or the other of the foregoing sources of income, sufficient grain being grown for home consumption only, while in a bad season purchases must be made. In part of the following parganas and pattis, however, grain is generally grown for sale: Painon, the Silás and the Kauriyás of Talla Salán; Ganga Salán; Bárahsyún; Chalansyún, Bachhansyún and villages along the Alakuandá in Dewalgarh; Lohba, Taili and Sili Chándpur in Chándpur; Pindarwár in Badhán; Talla Dasauli; Talla Panikhandá; Talla Káliphat, Bichla and Malla Nágpur in Nágpur. As a rule, it is only the valley villages which, on account of their unhealthiness, are least favourable to a swarming population, while they possess the most fertile soil and the climate most favourable to vegetation, that even in the above mentioned tracts sell grain generally or to a considerable extent.
- Communications.** 32. The communications of Garhwál consist of bridle paths, often of the roughest description, which are termed by courtesy, roads. Outside the Bhábar, the widest and best do not exceed ten feet in average breadth, and in rocky places invariably much less, and they ascend and descend by gradients of one in five or six. Bad as this may seem there are only a few roads which come up to this standard, such as the one from Kotdwára through Pauri to Srinagar, the one from Pauri towards Almora as far as Samai, the part of the pilgrim route between Simli and Panwákhál in Lohba and a piece of road between Gwáldam and Narainbagar. The greater part of the old pilgrim route up to Chamoli was of this description, but most of this was swept away by the Gauna flood of 1894, and a much narrower track made in its place. With the exception of the four roads above noted, the rest of those in the district exhibit a maximum width of about eight feet with a minimum of three or four, and in places (especially near to and behind the snowy range) even less, while they are so steep here and there that ascents and descents are made by means of steps. It will thus be seen that the greater part of the roads are barely practicable for baggage animals, and that wheeled traffic is altogether out of the question. Laden ponies and mules regularly traverse the route between Kotdwára and Srinagar, and also between Parwákhál and Karnprayág. The cost of this kind of carriage, averaging as it does Rs. 2-8 per maund between Kotdwára and Pauri, is such as to double the price of grain in the journey between Kotdwára and Srinagar. Hence the excessively high prices which prevail in the interior on the slightest appearance of scarcity. The same difficulty regarding carriage makes it impossible for the deficiency in the harvest of one part to be adequately supplied from another part. Throughout the rest of the district the ordinary means of carriage is by coolie, and the cultivators are bound by their settle-

ment agreement to provide labour for this purpose when called on by the District Officers. The rates of payment fixed are fairly liberal, but the people on account of the large amount of labour of this character which they are called on to perform both for themselves and for Government, have come so to loathe this description of work, that free labour can hardly be obtained at any price. And yet this system of forced labour must continue till at any rate the principal trade routes have been rendered suitable for wheeled traffic.

Besides the roads which have been made and are repaired by Government agency, each village is connected with those surrounding it by means of paths, which are two or three feet in width and of uncertain gradient, though occasionally, as in the village road to the water supply and the route taken by cattle to the jungle, they are five or six feet or even more in width and of very good gradients, the result no doubt of the tread of generations of men and thousands of cattle. It is not uncommon to find the roads pass through a cutting ten or fifteen feet deep formed simply by this means. The route is always selected so as to pass over good ground, rocks and precipices being studiously avoided; but the paths never go further out of the direct line than is necessary to secure this, and a zigzag up the face of a ridge is the favorite way of ascending to the top of a hill.

33. The interior administration of the district is of the same simplicity as the other institutions of Garhwál. There are no police, except at the towns of Srinagar and Kotdwára and during the summer at certain places along the pilgrim route, and crime is almost non-existent. The people consisting mostly of peasant proprietors or tenants with a vested interest in the land, are settled in village communities, among the members of each of which there is a strong spirit of clanship, as is evidenced by the number of castes simply named from the village in which their respective members reside. The headman of the village community is called the *padhán*, and exercises certain police powers, possessing amongst others the authority to arrest without warrant persons who have committed certain grave crimes. He represents the village community on all occasions when it is called on to act corporately, collects the Government revenue, and is rewarded by an assignment of village land or a percentage on the revenue, as well as by exemption from the personal obligation to supply labour. Over one or more *pattis* comprising from fifty to a hundred villages is placed an official known as the *patwári*, who must not be confused with the village accountant of the plains called by the same name, as the hill *patwári* keeps no village accounts or papers whatsoever. This officer is the executive unit of the district. He collects the Government revenue from the *padháns* of his circle, within which he also exercises the powers of an officer in charge of a police station. His third main duty is the collection of labour required for carriage and supplies for travellers and officers on tour. He has also to keep the District Officer informed of all that goes on in the *pattis* in his charge, and without this it would be impossible, in a country which is split up into minute valleys, the state of affairs in one of which offers no indication whatever of the state of affairs in the next, to have any intimate knowledge of what was occurring in the district. He has also to report changes occurring in proprietary and other holdings, unlicensed felling of timber, encroachments on Government waste, insanitary condition of villages and many other matters. The post as may be imagined is a responsible one, and would be still more so were it not that the District Officer and his native assistants spend a considerable portion of each year on tour, and as every *patti* in the district is pretty certain to be visited at least once in two years, any misconduct would almost infallibly be brought to light.

There is only one *tahsil* for the whole district, situated at the headquarters, Pauri. Till about 1840 A. D. there was a second *tahsil* at Kainyúr in Chándpur. Recently in 1893, sub-divisions, with a Deputy Collector stationed at each, were established at Chamoli and at the cantonment of Lansdowne. The administrative headquarters, Pauri, is a small village with no European residents, and the site appears to have been chosen merely on account of nearness to Srinagar, then the only town in the district. A small *bazár* has also sprung up since the establishment of a European Officer in Garhwál.

Interior administration.

CHAPTER II.

TENURES.

Introductory.

34. The subject of tenures both proprietary and cultivating in Garhwál is one which cannot be dismissed in a single paragraph. Particularly in a country where almost the whole population consists of peasant proprietors or cultivators with occupancy rights, there is hardly any matter on which the happiness of the people at large so much depends as on certainty of tenure, and at present almost all holdings are matters of the greatest uncertainty. No work on the hill tenures has ever been attempted, nor has the law on the subject ever been codified as has been the case elsewhere. The only published account is contained in fragmentary notices in the old Settlement reports, while all the modern history and law of the subject is contained in the proceedings of cases, consigned unnoted to the depths of record rooms. Particularly at the time of Settlement, when titles are enquired into and rights questioned, such decisions are occasionally unearthed by litigants whom they concern, and discoveries made as to the principles which guided the early rulers of the district in their judgments. Moreover, the best record of rights is necessarily imperfect. A pushing man will get more than his legal due merely owing to the yieldingness of his adversary, while the latter will be defrauded through his own failure to contest the former's injustice. It is therefore most necessary to set forth the principles on which the new record of rights has to the best of endeavours been framed, and by which it may be tested and tried, and if found wanting may be corrected. This will, it is hoped, be accepted an apology for the somewhat disproportionate amount of space allotted to this subject in the present report.

Proprietary right under the native kings vested in the Sovereign and inalienable.

35. Under the native kings the proprietary right in land was vested in the Sovereign and inalienable. Mr. Traill writes: "The paramount property in the soil here rests with the Sovereign. This right is not only theoretically acknowledged by the subject, but its practical existence is also deducible from the unrestricted power of alienation which the Sovereign always possessed in the land. . . . These tenures" (of the occupant zamíndárs) "were never indefeasible, and as they were derived from royal grants either traditional or existing, so they might be abrogated at the will of the Sovereign, even without allegations of default against the holder, and without reservation in his favour. The peculiar nature of the country rendered the exercise of this right frequent in the neighbourhood of the capital. The difficulties of procuring supplies in the province have been alluded to. Individuals settling at Almora or Srinagar, under the auspices of the reigning prince, in consequence, received the gift of a small portion of land for the establishment of their families. Where a provision in land was called for to reward military services or to remunerate the heirs of those slain in battle, it was usually made at the expense of existing rights."

Thát or grants of land.

36. "The property in the soil is here termed *thát*, and grants in *thát* conveyed a freehold in the soil as well as the produce." "The rents of these lands have at subsequent periods been almost wholly resumed to the rent roll, but the property in the soil has generally been suffered to remain with the heirs of the grantee. It is on grants of this nature that the rights of a large body of the occupant land-holders are founded."

Cultivators.

"The land in the interior seldom changed proprietors. The greater part of the present occupants there derive their claims to the soil solely from the prescription of long established and undisturbed possession; and this remark applies also to many individuals more particularly Brahmans, whose ancestors, having originally obtained estates on grants, not conveying any property in the soil, their descendants have, subsequently, by the migration of the actual occupants, come into the full possession both of land and produce." Of grants which did not convey "property in the soil," but were only assignments of revenue, the most common were those made as remuneration for the fulfilment of a public office, known as *Negichári*, *Kamínchári*, *Jaidad*, &c., and those made for the endowment of religious establishments.

It would appear from this that all cultivators of the soil, whether grantees or not, came to be in course of time on much the same footing, so long as no one obtained a grant against them. Mr. Traill also adds: "The occupant zamindárs hold their estates in hereditary and transferable property." Mr. Traill had better means of judging of the tenures which prevailed under the Rájás than any one since his time, but there are two reasons for supposing that the right of cultivators in land was not transferable. In the first place local tradition ascribes the origin of the private right of transfer of land to the introduction of the British rule; while again, no private right of transfer exists in Tehri Garhwál at the present day, which is ruled by the descendants of the old Garhwál Rájás, and where there is every reason to suppose that the old customs are preserved more or less intact. A sale of land in Tehri Garhwál even by a grantee is regarded as an assumption of the royal prerogative and punished accordingly. Of course the *right* of transfer alone is referred to. As in Tehri at the present day so in Garhwál under the native kings, no doubt transfers took place, and for a consideration; probably as in Tehri by the form of a mortgage of the transferor's holding, with cultivating possession to the transferee; a mortgage which was never afterwards redeemed. And it is probable that under the Gurkhas, who cared for little but the revenue raised from the country, such transfers were regarded by the authorities with indifference. Their cultivating rights are commonly mortgaged by *kháekars* in Garhwál at the present day, though the holdings are regarded as non-transferable, a fact which is not improbably a survival of the original custom of transfer by those in cultivating possession of land.

37. "Where the land granted," says Mr. Traill, "was already held in property by others, those occupant proprietors, if they continued on the estate, sank into tenants of the new grantee, who, moreover, by the custom of the country, was permitted to take one third of the estate into his own immediate cultivation or *sír*. Of the remainder of the estate, the right of cultivation rested with the original occupants, who were now termed *kháekars* or occupants in distinction from *thátwán* or proprietor." In Nágpur there are a number of villages illustrative of this system, the high castes, Bartwáls, Bhandáris, Ráwats, &c, no doubt the more recent grantees, being the proprietors of the whole village with cultivating rights in part only, while the Khasiya castes, no doubt the earlier occupants, hold the remainder of the village as *kháekars* of the high caste proprietors. It would appear that if the grantee did not at once exercise his right to take part of the village into his own immediate cultivation, he was subsequently debarred from getting a footing there at all, and remained entitled merely to his manorial dues. Mr. Batten derives the word *kháekar* from *kháná*, to eat, and *kar* the royal revenue, that is, he may enjoy the land, so long as he pays the revenue. Besides the Government revenue (*sirti*) the *kháeker* was called on to pay to the proprietor various dues known as *bhent* (special cash payments), *dastúr* (dues in kind) and *pithái* (an annual trifling cash rent).

The under-proprietary right. *Kháekars*.

38. "The *khurnis* were tenants and settled on the estate by the proprietors, and by long continued occupancy might come to be considered in the light of *kháekars* from whom indeed they differed little except in the nature of the rent to which they are liable." As the *khurni* or *kaini* according to Mr. Traill paid a higher rent than any other description of tenant, it was no doubt found convenient to allow him an hereditary right to cultivation, though strictly this right belonged only to the *kháekar*. The land of the childless *khurni* would, moreover, naturally revert to the proprietor at his death, and this may not improbably be the reason why the *kháekar*, who, in villages where the grantee forbore to take cultivating possession in the beginning, now entirely excludes his heirs, so that on a *kháekar* in such a village dying without an heir or even collateral, his land reverted to the village body of *kháekars*, should he die in a village where the proprietor holds land in cultivating possession, the holding passes not to the body of *kháekars*, but to the proprietor. The analogy of position between *kháekars* and *khurnis* would probably have been quite sufficient to establish this custom. Mr. Batten says regarding the

The occupancy-right. *Khurnis* or *Kainis*.

khurnis : " This class of tenants is fast becoming merged into that of *kháekars*." It seems doubtful whether during the period of British rule they were ever distinguished, as no mention is made of *khurnis* in the oldest settlement papers; they appear to have been treated exactly as *kháekars*, and certainly not only is no distinction made now, but the very name is lost, and it would be impossible to find out whether any given *kháekar* acknowledged for his ancestor a vassal tenant, or a reduced occupant proprietor. Sir H. Ramsay, however, is said to have acknowledged a distinction between *pakká* and *kachchhá kháekars*, having reference no doubt to the under-proprietary and occupancy rights discussed in this paragraph, and in a Settlement dispute relating to Mangaon, patti Dug in the Almora district, decided by Pandit Amba Datt, Deputy Collector, in 1843 A.D., the same technical expression, "*pakká kháekar*," in used.

Kamíns, sayánas, and thokdárs.

39. The three terms *kamín*, *sayána* and *thokdár* have the same meaning, *kamín* being used in the south of Garhwál and *sayána* in the north, and the officers represented by these names corresponded to the zamíndárs or farmers of land revenue of the plains. They were as a rule chosen from among the principal landholders of the tract. "The influence once obtained in the situation," says Mr Traill, "generally led to its continuance in the same family, even when the individual holder was changed, and in some instances the *kamíns* themselves eventually succeeded in obtaining a grant of the feud under the usual conditions." The *thokdárs* again "appointed one of the proprietors of each village, under the designation of *padhán* to levy and account directly to them for its cess." The *padhán* was "removable...at the will of the *kamín* and *sayána*." "The remuneration of the *kamíns* and *sayánas* consisted of a trifling *nazrána* from each village," and a portion of land rent free in their own village. They also received the customary dues from the *padháns* of their tract, viz., Rs. 2 on the marriage of a daughter, the leg of every goat killed and a *mána* of *ghí* and a basket of maize (*mungari kandi*) in the month of Sáwan. These precise customary dues are universal throughout Garhwál, from tenants to proprietors and of old from proprietors to *padháns* and *padháns* to *thokdárs*, and were no doubt insisted on rather as a symbol of feudal subjection than for their intrinsic value. The reason for taxing the daughter's marriage and not the son's is no doubt that on the former occasion the father receives a considerable sum of money from the bridegroom. The *padhán* like the *thokdár*, besides the customary dues, enjoys a portion of land rent free in his own village, now known as the *padhánchári* land. Mr. Traill thus describes the *padhán* of his time. "The *padhán* is the village ministerial officer entrusted with the collection of the Government demand, and with the supervision of the police of his village. He is commonly one of the village appointed with the approbation of the other joint sharers and is removable for malversation or at the requisition of the majority of sharers. He collects the Government revenue agreeable to their several quotas. He pays also the rent of his own immediate share of the estate. He is remunerated by fees on marriages, and a small portion of land set apart for the purpose. There is no hereditary claim or right to the situation of *padhán*, but generally the son succeeds without opposition, unless incapable from youth and want of talent, in which case the sharers are called upon to choose another *padhán* from among themselves. Uncultivated lands which may not have been subjected to division among the proprietors are managed by the *padhán*, and the rents yielded from their cultivation are accounted for by him to the body of proprietors, who take credit for the same in the quota of the Government cess to which they are respectively liable."

Padhána.

It is not clear that the *thokdár* in the earliest times actually farmed the revenue, and it seems probable that the amount of his collections was determined by the State. The State assessments were not, however, made on each individual village, a lump sum being frequently assigned to several and in such cases, no doubt, the distribution of the assessment was left to the *thokdárs*.

The *hissadári* or proprietary right.

40. The *hissadári* right is as before mentioned, said to have been an introduction of the British rule. The idea of land without a private owner seems to have been repugnant to the earliest British administrators and as in the plains the proprietary right was conferred on the zamíndárs, or revenue collectors, so in Garhwál it was

conferred on the occupant cultivators unless some one else could shew that a grant of the land and not merely an assignment of the revenue, had been made to him. The cultivators were then termed *hissedárs* or co-sharers in the estate, and were allowed full rights of transfer in the cultivated land of the village. These rights were never extended to the waste lands as will be shewn further on. In the grant of this proprietary right, however, the thokdárs or *sayámas* appear to have frequently used their position as collectors of the land revenue to secure to themselves *hissedári* rights to which they were never entitled. Mr. Batten thus explains how this has come about. "When the thokdár of a *mahál* has accepted the *málguzári pattá* of one or more of its *mauzás* owing to the failure in procuring a village *padhán*, he has been recorded in the settlement *misl* as a kind of farmer in order to distinguish him from the actual proprietors of the village lands. In some of the poorer and less populous parganas the influential thokdárs have, during the course of former settlements continued to increase their proprietary possessions, and to obtain by silent usurpation a title to such acquisitions merely because no record whatever was at the time taken as to whether they became the holders of the *padhánship* because they were by right entitled to the office or whether they became so because they have been elected or accepted as managers of the estate merely for the period of the settlement lease." When in such cases the thokdár obtained the *hissedári* right the occupant proprietors sank into the position of *kháekars* in exactly the same way as in the case of a new grantee under the native kings. Perhaps even a more frequent case of usurpation of the proprietary right was that of assignments of revenue granted for the fulfilment of public offices, the kanungos, negis, &c., frequently getting the land recorded as their own property.

41. "Another kind of resident tenants, however," says Mr. Traill, "who rent the land which the proprietors from absence or other causes are precluded from cultivating themselves, have no right of occupancy, either acknowledged or prescriptive. The tenants pay their rent either in *kát*, kind (commonly at one-third of the produce), or in money, according to existing rates or engagements or to former usage. Where there is little demand for the land it is usually let for a moderate money rate, which tenure is termed *sirtán*, that is the renter pays merely *sirti*." The term *sirti* meant the Government land revenue proper under the Rajás, the original "agricultural assessment." "The *sirtán* tenant formerly paid nothing but the land assessment and was expressly exempt from the various extra cesses which formed three-fourths of the public demand. These latter fell on the proprietor." "Where there is no offer for the land by any of the resident cultivators, the owner lets it to any of the inhabitants of the surrounding villages. This is termed *páekásht* cultivation... The *páekásht* cultivation is from its uncertainty necessarily subjected to a lower rate of cess than other lands. The fickle disposition of such cultivators is notorious and their employment a speculation." On which Colonel Gowan (Commissioner of Kumaun in 1837) has noted. "At present the only distinction between the *sirtán* and *páekásht* tenants is the duration of tenure; the *sirtán* tenants being generally permanent, the *páekásht* removable at will." The tendency has been as in the case of the *kóini* and *kháekar*, to confuse the status of the *páekásht* and *sirtán*, much to the latter's disadvantage. Mr. Beckett (in 1865) even went so far as to say the *sirtán* "has no permanent rights whatever. He makes his own arrangements with the proprietor usually only for one crop." In the time of Mr. Traill, and even till much later, the competition for cultivators exceeded the demand for land, and this secured the most favourable terms to all tenants-at-will, who in fact paid less rent than any other kind of tenant, little more than the actual Government revenue assessed on the land.

Sirtáns or tenants-at-will.

42. Neither the *haliyá* or the *sáji* are properly speaking sub-tenants. The former cultivates as a vassal of his master, and can hardly be said to have a holding of his own. The latter exists only in the Bhábar, and his status though more independent is somewhat similar.

Other cultivators. *Haliyá*
and *sáji*.

The *haliyá* was originally, and for some years even under the British rule, a slave. They are thus described in Mr. Mosely Smith's report on "Slavery in Kumaun" dated

5th February 1836. "Serfs or *adscripti glebæ* under the denomination of *halee*, by means of whom Bráhmans and other principal landed proprietors, who are restricted by the custom of the country from personal labour in the fields, cultivate as much of their land as practicable, and who are invariably doms, or outcastes, belonging with their children and effects to the lord of the soil, like the beasts or other stock on it. . . . Field slaves . . . are boarded and lodged by their owners and receive moreover a *thán* of cloth for a dress every third year. On the occasions also of their marriages the master defrays the wedding expenses. The purchase of slaves for agricultural and other purposes is still very common in this province." Excepting that these doms are now not bound to the land or to any one master, this description almost entirely holds good at the present day, for though the bond of slavery is gone, the *haliyá* is as dependent on his master as ever. His emoluments have perhaps somewhat increased. He gets a blanket every rainy season and the suit of clothes more often, and at the harvest he usually receives a present of eight *nális* or a *don* of grain. He entirely tills and reaps as much land as one man is capable of cultivating, all instruments, etc., being supplied by his master and all the produce going to him. Khasiyas or Rájputs are also employed as *haliyás*, but almost all these are simply in the position of servants.

The *sájhi* is usually a *chamár* from Bijnor and is neither a servant nor a tenant. He is given a piece of land by his patron and furnished with a plough, cattle, tools and seed. He himself furnishes the labour for ploughing, sowing and reaping. Of the crop as reaped, the *sájhi* gets a quarter or one-third, the patron taking the rest. The arrangement is not always so disadvantageous to the *sájhi* as would at first sight appear. A little pilfering of grain and other things here and there, added to a little cattle stealing, commonly in course of time so enriches him that after a few years he will usually be found, instead of a penniless man without a plough or even a few handfuls of seed, in possession of a pair of oxen and a little money of his own, with which he will take up a small holding on his own account, and will blossom into a regular tenant.

Unmeasured land and
waste.

43. It has been seen that under the native kings the proprietary right in land rested with the Sovereign. The villagers, however, exercised certain cultivating and other rights over the village lands, and in process of time certain points had come to be regarded as the limits of the area within which those rights held good; land beyond those points being regarded as within the area of another village, and thus almost the whole country, cultivated and waste, exclusive of the largest forests, came to be regarded as within the boundary of one or another village. Under the British Government, the proprietary right was given to the occupant cultivator, unless a better claim was proved against him. But this only had effect in the cultivated lands, and over the waste lands the British Government as the successor of the previous sovereign power retained the proprietary right, partly no doubt in order to prevent injurious monopolies which would hinder the spread of cultivation and the development of the country, but chiefly apparently because the proprietary right over this waste was at that time of no value to the villagers. For whenever land was newly broken up, "the proprietary right," says Mr. Traill, "is always granted to the reclamer, in consideration of the expense incurred by him in the enterprise." This practice of granting land to the man who brought it under cultivation was originated by the Gurkha Government to encourage cultivation of villages which had fallen waste. In the "great measurement" of 1880 Samvat (hence called the *assi sál*) carried out by Mr. Traill, a record was made of the recognized boundary marks of each village; but in the statement of area the measurement (estimated) of the *tóks* of cultivated land was alone entered. Mr. Batten in 1842 A. D. was the first who found it necessary to declare that "the right of Government to all forests and waste land not included in the assessable area of villages remains utterly unaffected by the inclusion of certain tracts within the boundaries of *maruzás*." Villagers were strictly forbidden to realize grazing or other dues from any one, unless they could prove a right to such dues by immemorial custom. In the case of grants of waste land, known as *nayábád* leases, he laid down that "the village most adjacent to the tract," or within whose boundary it lay,

“should have the first refusal,” and no grant should be allowed within a certain distance of assessed village lands. Waste land is known as *benáp*, unmeasured, because hitherto, such estimates or measurements of area as have been made at succeeding settlements, have only taken account of cultivated, or culturable and terraced, land. The rights exercised over unmeasured land are defined by Mr. Beckett in his settlement report as the right of pasturage, the right of using forest produce including timber, and the right of extending cultivation. As regards the last he says “During the currency of the settlement, all villagers had the power of increasing cultivation without being liable to any extra revenue.” And in his Kumaun report Sir H. Ramsay says still more emphatically: “The villagers have full power . . . to extend their cultivation in the unmeasured or forest tracts; and they have the benefit of such extension without any increase of demand during the currency of the settlement,” and he proceeds to shew the beneficial results of this rule. A judicial decision to the same effect was given in the case of Gugli, Talla Káliphat. An outsider applied for a grant of a small piece of waste land and on the villagers objecting, the grant was according to custom made in their name. In appeal, Sir H. Ramsay ruled on 9th August 1866, that the people might cultivate waste land within their boundaries without permission and cancelled the special grant. Extension, however, did not mean the breaking up of new land at a distance from the village and perhaps in the heart of a forest. This is evident from the case of Syánri village in Nandák, where it is noted in the last settlement papers that a fine of five years back revenue was levied on a new piece of cultivation made without permission in Bangáli *tók*, a mile or so from the other cultivated land of the village. Such tracts distant from the village formed the subject of the separate *nayábád* grants, spoken of by Mr. Batten. In making such grants the second of Mr. Batten’s conditions, namely, that the site of the grant should be distant from assessed village land is always followed unless there are special reasons to the contrary, though the first of his conditions, that the grant should always be offered to the nearest village is impracticable in these days, as the nearest village will invariably take up the land even at ten times a fair rent, merely to prevent a stranger acquiring it. An instance in point is Marwára village in Lohba, which, on proposals being made a few years ago for a grant of land at Diwálikhál above the village, took up the whole at an annual revenue of Rs. 100, three times the amount of the revenue paid by their entire village, and this although they were quite unable to cultivate the whole of the grant land, and in fact only made a few fields in it. A third condition has become necessary of recent years and is usually acted on, namely, that grants shall not be made where there are forests of valuable timber which there is any possibility of bringing to market, as in such cases the property destroyed is far more valuable than the rental of the land. Of course not only where the timber is required for villagers but even in cases where the timber is not largely in excess of all possible village requirements, no application for a *nayábád* grant would be considered for one moment.

Nayábád grants, which require the Commissioner’s sanction are quite separate from executive orders of the District Officer permitting cultivation of waste land. These latter are a comparatively recent introduction. As has been shewn the custom of the country has been that new cultivation could be made by the villagers by mutual consent, within and around their assessed lands, and that new cultivation in separate *tóks* required a *nayábád* grant. The system of requiring executive sanction to all extensions of cultivation large or small arose in 1887 “for the better control of reckless destruction of timber.” As applications for this sanction numbered thousands annually, any elaborate enquiry was impossible. No maps were made nor was it considered practicable to require the applicant to make a week’s journey or more to the district court in a matter of a few square yards of land. The application was simply referred to the patwári for report as to the suitability of the land for cultivation, the trees on it and so on; and if the report was favourable, the application was granted. It is not surprising that this method with its want of publicity and the power it gave to the patwáris was used largely by unscrupulous persons to get sanctioned in their name

land actually in the cultivating possession of others. Orders were issued by Mr. J. R. Reid as Commissioner for discontinuing this system on the 1st January 1889, but it survived nevertheless. These applications were rendered unnecessary by the Board's Order No. $\frac{199}{1. 534}$ of 1st March 1895, which laid down that "the cultivation of small plots on intervening waste between cultivated fields may be left to the village community without permission being required" in each individual case. The only restriction on such cultivation is now that contained in the Forest Rules notified as Government Order No. $\frac{843-F.}{638-69}$, dated 24th October 1894, Rule 6. "No extension of cultivation, where it involves the cutting of trees, shall be made without the permission in writing of the Deputy Commissioner." This permission has the advantage that it cannot be abused to filch the proprietary right from some one else.

For the protection of the village communities against a too pushing member, and to enable it to enforce its decisions regarding the cultivation of waste or common land, a civil suit lies against an extension of cultivation, or an executive order permitting such cultivation. Such suits have been common since the last settlement and possibly previously, and Sir H. Ramsay has left several decisions to the effect that grazing land must not be brought under cultivation against the will of the village community (e. g. *Situ Ráe of Kandára Talla Káliphát versus Panchamú*, 30th November 1875). The case of *Kishna of Dandálgaon, Nándalsyún versus Dhonkalu* (26th February 1895) is a recent decision of the Commissioner's court to the same effect. It is frequently the custom of villagers from petty spite to sue to restrict cultivation on unmeasured land long after such cultivation has been made. Regarding such cases Mr. D. T. Roberts as Commissioner ruled in the case of *Haiyyát Singh of Syúni Bachbansyún versus Jawáru and others* (17th August 1893). "Mere extension of cultivation without permission or even in face of an old prohibition should not be allowed as an excuse for one quarrelsome resident of a village to harass and annoy the rest of the villagers. When the question has to be considered whether "*gauchar*" should be allowed to be broken up and cultivated, it is the general interest of the villagers and not of any particular one of them that should weigh. In this case the *kanúngo* reports that the land has been under cultivation for twelve years, and it is admitted that much of it has been under cultivation for a long time. The Deputy Collector's order directs that it *all* be made waste again in order to limit the inconvenience suffered by one villager. Such an order is injudicious and tyrannical. The whole area is only three or four acres and it is inconceivable that this diminution of the area of pasturage can have much effect."

Boundary disputes.

Notwithstanding the large area of waste land usually existing outside the cultivation of the village, but within the nominal boundaries, boundary disputes are not uncommon, and refer usually to a patch of cultivation on or near the nominal boundary line; when the latter consists of a ridge, frequently in the middle of it. In such cases, it was ruled by the Board in 1891, "the land should be included in the village to which the persons in possession belong;" the ancient boundaries being altered accordingly.

Fee-simple grants and grants under the waste land rules.

44. Proprietary rights in waste and forest lands at present exist only in the case of fee simple grants and grants under the waste land rules. Grants of the former class were made only before or soon after last settlement and were acquired by the payment of a cash sum of money by the purchasers. They are free of land revenue and the owners have, subject to the right of Government to a royalty on minerals, the most absolute rights over their estates. A list of these estates is added as an appendix to this report. They are almost all tea plantations or obtained with the object of converting them into tea plantations. Most are situated in Chándpur pargana, though there are a few round Gwáldam in Badbán, and Mándúkhál and Gadoli with its laggas, (the latter formerly the Government tea plantation) are situated on the borders of Bárahsyún and Dewalgarh.

In grants under the waste land rules, which are still in force, the estate is subject to the payment of land revenue and the purchaser is bound to clear and stock with tea

plants a certain quantity of land in a given time. Only one grant of this nature Agswará in Kandársyun was ever made in Garhwál (in 1867); and it was abandoned soon after owing to the inability of the grantee to carry out the conditions, and has now lapsed to Government.

45. The term "*gúnth*" by which all assignments of land made to religious establishments are now designated is of comparatively recent introduction dating only from the times of the Gurkhas, the older names by which such endowments were known being the ordinary Hindu words *shankalap* and *bishenprit*. It appears from Mr. Traill's writings that these grants were merely assignments of land revenue and conveyed no property in the soil, though in many cases the descendants of the Bráhmans to whom they were originally made "have subsequently, by the migration of the actual occupants come into full possession of both land and produce." The number of religious assignments of this description made by the native kings, was exceedingly numerous, comprising either the whole or part of several hundred villages in Garhwál alone. The grants were almost all upheld by the Gurkhas, and also by the British Government, though in many cases the original title deeds had been lost, and the claim rested chiefly on the *defacto* possession of the revenues of the land. Between 1850 and 1854 an enquiry was conducted into the title of the temples in *gúnth* villages, and a large number of villages regarding the assignment of which no proof could be offered were resumed to the revenue roll, though in the case of very many, the lands were upheld as *gúnth*, on confirmatory documents granted to the temples by Mr. Traill, and in consequence of continued possession of the revenues.

Gúnth lands.

The chief contested points regarding the tenure of *gúnth* lands relate to the position of the temples with regard to the land; their position with regard to the cultivators, and the revenue payable by the latter; and finally, the tenure enjoyed by the cultivators of the land themselves. At the present settlement on the principle that nothing is lost by large claims, the temples, particularly Kedárnáth, claimed most extensive rights in the *gúnth* villages, alleging the very exhaustive terms of the original grants, which in reality were only technical modes of expression such as are even in these days used in private deeds of conveyance. The right of the temple managers to interfere in the cultivation of lands, which are not actually in the cultivating possession of the temple worshippers or servants has never been recognized, nor until quite recently does it appear to have been arrogated. For instance in 1827 A. D. the Ráwal of Badrináth wished to settle cultivators in the *gúnth* village of Bíná in patti Lohba which had lain waste for fifty years, but first asked Mr. Traill's permission to do so. Again in the years following the last Settlement whenever waste *gúnth* villages were settled with cultivators, a *nayábád* grant was made in precisely the same way as in revenue-paying villages, by the district authorities; the only difference being that the revenue so assessed went to the temple instead of to the Treasury. In the case of Gangá Rám *versus* Rámdhan of Sunkoli Chalaansyún, a most voluminous litigation which went on in various shapes from 1888 to 1895, it was distinctly laid down that the temple had no authority to settle its waste villages with any one, and that it could give its lessee no title to possession. Claims of the temple for dues from unmeasured land lying within the nominal boundaries of *gúnth* villages have met with a similar rebuff. In the case of Kedárling *versus* Ghunánand Pandá and others, the plaintiff, Ráwal of Kedárnáth, sued the defendants for grazing dues in respect of Ukhimath jungle. The claim was dismissed and Sir H. Ramsay ruled in appeal that "Parties can do what they like by mutual arrangement, but no dues can be taken which are not entered in the Settlement papers." The rights of the temples over *gúnth* lands were finally laid down in G. O. No. $\frac{2880}{1-348B}$ of the 15th November 1895 as follows:—

- (1) That the claim by the managers of the temples of Badrináth and Kedárnáth and other shrines in Garhwál to waste land in the *gúnth* villages is wholly untenable.

- (2) That where the grants in *gánth* villages consist of entire villages which were held revenue free at last Settlement, the whole of the revenue shall continue to be assigned or released.
- (3) That where the grants consist of parts of villages, the cultivated area in excess of the original grant shall be resumed and assessed.

As regards any attempt to interfere in the management of cultivated villages, the result has been the same, as instance Rámánand *versus* Parmánand of 15th February 1820, and Bhagotu *versus* Basuling Ráwal of 8th July 1829. In both these cases the Ráwal of Kedarnáth tried to get *gánth* villages under his own control, but Mr. Traill ruled that the cultivators should continue to pay the temple revenue through the Brahman sub-grantee, and that the dues payable by the latter should continue at the fixed rate mentioned in the deed of grant. In the record of rights made for *gánth* villages at last Settlement, the resident cultivators were as a rule recorded as *hissedárs*, as was done in the case of cultivators in revenue paying lands at the British conquest, the revenue paid by them going, however, as heretofore to the temples. The revenue was at the same time assessed in cash instead of in grain and miscellaneous services. But the Ráwal of Kedarnáth finding that the temple would lose by this arrangement persuaded the villagers around Ukhimath to continue to pay in grain at the rate of one *don* (32 *sérs*) to a rupee of revenue. As the price of grain rose a tendency was evinced to shirk this arrangement, and finally stamped agreements were taken from the villagers to pay a fixed amount in grain. In one case such an agreement was upheld so far as it related to the signatories by Col. Reade, Senior Assistant Commissioner, but in the subsequent case of Kedárling *versus* Debu and others of Ukhimath, where the plaintiff, Ráwal of Kedarnáth, sued the defendants, *kháekars* in Asma village, for grain rents, it was decided that only the rent fixed by the Settlement Officer could be demanded, a decision which was upheld by Sir H. Ramsay in appeal (June 1, 1880). At the present Settlement this subject still formed an agitating topic around Ukhimath, and a reference was made on the subject to the Board of Revenue who ruled the utter illegality of any private arrangement for paying grain rents when these had been fixed by the Settlement Officer in cash.

The disputes regarding the nature of the tenure of cultivators in *gánth* lands, who were all recorded as *hissedárs* at last Settlement, chiefly concerns their ability to alienate the lands they cultivate. It has been urged with some show of truth that the proprietary right was given to such cultivators somewhat too freely at last Settlement. For instance, it will frequently be found in part *gánth* villages, such as Kimotha in Bichla Nágpur, that the same men cultivating both *maháls* are recorded as *kháekars* under the *thokdár* in the revenue-paying land and as *hissedárs* in the *gánth*. The inference of course is that the original grant was of half the village to the *thokdár* and half to the temple, and that the cultivators in both parts should have been recorded as *kháekars*. In other cases the *gánth* lands are in the direct cultivating possession of the temple worshippers and servants, who enjoy the land, revenue free, as payment for the services performed by them in the temple. Whether this position came about by reversion to the temple authorities of the possession of the land owing to the migration of the original cultivators, or whether it is due to a direct grant of property in the soil to the temple authorities, the original cultivators being ousted at the time of the grant, it would be idle at this distance of time to enquire. But in all such cases too, the cultivators in possession, whether they held merely because they happened at the time to be temple servants or otherwise, were recorded as proprietors, though they held merely the usufruct of the land in return for their services. This usufruct is of course a far more considerable sum than the revenue of the land. In many cases the worshipper of the temple holds an acre or so of land the produce of which enables him to eke out a subsistence. But he could not possibly live on the rupee or so of revenue assessed on the land, which would be all the temple would receive if the land were sold to an outsider, and the consequence of such a sale would be that the worship of the temple would cease, and the purpose for which the grant was made would be

rendered ineffectual. It has therefore been ruled on various occasions that temple worshippers and servants holding the possession of land as direct payment for their services in the temple are not entitled to alienate it. The earliest discovered case of this kind is an Almora one, though it would appear from correspondence that earlier decisions to the same effect had been given by Sir H. Ramsay in Garhwál. In Kundan Lál Sáh of Almora *versus* Panua, *gúnth* land of the above description was attached in execution of a decree. Colonel Garstin, the Senior Assistant Commissioner, referred the legality of the attachment to the Commissioner, Sir H. Ramsay, in these terms: "In my opinion where *gúnth* land is in possession of the *pujári*s in return for which they are required to perform service in the temple, the land in their possession cannot be attached in satisfaction of their private debts. For, if it is auctioned, this service in the temple will fall on the purchaser, and this cannot be performed by every caste. This opinion will be sent to the Commissioner. In villages in which the possession of the *gúnth* land is not with the temple servants, the temple authorities do not appear entitled to raise any objection to attachment." On which Sir Henry Ramsay's order of the 13th June 1878 was: "The opinion of the Senior Assistant Commissioner is correct. *Gúnth* land should not be attached in satisfaction of a private debt." In 1880 a still stronger case occurred in Garhwál (Durga Singh of Marwára Nandálsyún *versus* Salik Ram). The defendant, a mahant, wrote the plaintiff a mortgage-deed hypothecating temple land. The plaintiff sued for foreclosure. The defendant was the recorded co-sharer, and in possession of the land. The claim was dismissed on the ground that the mortgage land was the *gúnth* of Lachmi Narain Shankar Mat, and that the Mahant had no power of alienation. "If the Mahant is given such powers, no temple lands will remain." Sir H. Ramsay dismissed the appeal on the 19th November 1880. In another Almora case Gulab Singh of Tuhár, Salt Palla *versus* Rám Datt, Sir Henry Ramsay's ruling of 1878 was amplified by Mr. Giles, Senior Assistant Commissioner, as follows: "There are two kinds of *gúnth* land. Of one kind the *pujári* of the temple receives the profits as payment for his services to the temple. With such land a decree-holder against the *pujári* has, I conceive, no right of interference. But with respect to the other kind of *gúnth* land the temple stands in the place of Government with regard to ordinary revenue-paying land. Its assesment was fixed at Settlement and the temple authorities have no power to alter it, nor, so long as the revenue-payer meets the demand, have they any power of interference with him." Colonel Erskine in appeal endorsed this opinion (18th December 1890). Another case is that of Dulanáth *versus* Padangír and another, Binkoli, Malla Katyúr. One Lúcha Náth sold land recorded in his name as co-sharer, and which he held revenue free in consideration of performing service in the temple, to Padangír. The latter was admittedly incompetent to perform this service, and the plaintiff, *sirgároh* of the temple sued to cancel the sale. It was admitted that other sales had taken place. It was held by Mr. Giles, Deputy Commissioner, that in such case the *pír* for the time being had not done his duty, and that "such neglect can give the appellant no right to the wrong that would be done to the temple by transfer to him." Also that "any worshipper might bring into court a case of perversion of the temple endowment." This decision was upheld on both grounds by the Commissioner, Colonel Erskine (4th December 1893). It is only just to add that the decisions of these authorities from Sir H. Ramsay downwards have been overthrown by the most recent cases in point, also Almora ones, Prem Singh of Bageswar *versus* Kuna Sáh (21st July 1894), and Daulat Singh Bhandari of Melchaunri Malla Katyúr *versus* Amba Datt and others. *Gúnth* villages in which the land is in the direct cultivating possession of the temple-worshippers are by far the less numerous. In the other and larger number of instances in which the obligation of the cultivators begins and ends with the payment of the revenue to the temple there has never been any question regarding the power of the men recorded as *hissedárs* to alienate their land, as appears from the above cases.

46.—The *sadábart* villages consist of charitable endowments of land revenue for the purpose of the distribution of food to pilgrims proceeding to Badrináth and

Sadábart and *muáfi* tenures.

Kedárnáth, the greater part of which were assigned under the Gurkha Government. Besides scattered villages in Báráhsyún they comprise the whole (excepting *gánth* villages) of pargana Dasauli and pattis Parkandi, Bámsú and Maikhandá of pargana Nágpur. The administration of these revenues at first rested with the temples, but Mr. Traill took the funds into his own hands and used them to improve the roads and bridges leading to the shrines. In 1850, the revenues were placed under the control of a Local Agency and the income was devoted to the erection and maintenance of dispensaries, where medical relief was distributed to the pilgrims, and to the building of rest-houses along the pilgrim route. The system of management by local agency proved a failure, and the control of the funds was transferred to the District Officer of Garhwál. The revenue is still applied to these purposes. The cultivators of *sudábart* villages are in exactly the same position in regard to their lands as the cultivators of revenue-paying villages. The assessment of both is collected in the same way, but that of the former constitutes the income of an excluded local fund.

Other revenue-free holdings on village tenure, are by no means numerous, as although the number of such holdings under the Rájás was exceedingly large, few escaped resumption under the Gurkha Government. "At that period" according to Mr. Traill, "all grants in favour of public and private servants of the former Rájás were resumed, and subsequently the *jagírs* of private individuals including even those of the Brahmans, were with few exceptions subjected to the same measure." Almost all the survivals are plots of land, mostly gardens, at Srinagar. The remaining *muáfi* holdings are only three in number: Pokhri and Ghoret in patti Kandwálsyún held by one Ramnáth who purchased the land from the grantee's descendants since last settlement, Gádi village in Dasauli Talli, and Milai and Barsuri in Kandársyún held by Balmukand, a descendant of the grantee. One of the few *jagírs* confirmed by the Gurkhas was one held by the Khanyúris in remuneration for their duties as keepers of the land records, the annual value of which was estimated at Rs. 1,500. On the recommendation of Mr. Traill the *jagír* was resumed by Government and four hereditary *kanúngoships* created, the emoluments of which were to be Rs. 1,500 a year on Rs. 31-4-0 a month to each man. These posts still remain and are held by the Khanyúri family. One revenue free grant has been made under the British Government, that of the village of Ghosikhátá in the Blhábar to Subahdár-Major Balbhadrá Singh in 1888 A.D.

The plots of *padhánchári* and *thokdári* land existing in almost every village in the district have at the present settlement been treated as *muáfi* holdings, the land being recorded in the name of Government, and the incumbent of the post as the *sirtán* in possession. At last settlement, the whole area was assessed and the revenue of the *padhánchári* and *thokdári* land distributed among the other co-sharers. In either case the result is practically the same, as with the total assessment for the district fixed there would be no gain from assessing the *málguzári* land in detail. This will explain why these plots of land though entered as *muáfi* have so far as the assessment of cesses is concerned been treated as part of the assessed village lands.

Present position of the *kissedár*.

47. The position of the *kissedár* in unmeasured land has been alluded to in the foregoing paragraphs. It remains to describe some of the customs relating to the whole of his holding, including his rights in both measured and unmeasured land.

Pre-emption.

Foremost among these is the custom of pre-emption. It is impossible to state what was the origin of this custom, whether borrowed from the Muhammadans, (which seems from the nature of the district most improbable) or of indigenous growth. The custom flourished previous to last settlement, as a decision of Sir H. Ramsay (in the case of Dewan Singh of Parsoli Gujru *versus* Kuttu and another dated 18th July 1859), allowed pre-emption to one co-sharer as against another in the same village merely on the slender ground that the former was of the same caste as the vendor, though in the case of Báli of Paniya, Idwálsyún *versus* Amlanand (18th September 1873) the plaintiff though a nephew of the vendor, and co-sharer in the

same village was disallowed pre-emption on the ground that the land was not ancestral. Pre-emption suits have even been extended to the right to collect offerings from pilgrims at Badrináth (Belmu and another of Maithana Talla Dasauli *versus* Kamrúp and Raghunáth, 26th January 1872, and Mahimadatt *versus* Nand Rám, of 26th August 1873). The existing practice in pre-emption cases as embodied in the settlement memorandum of village customs is as follows :—(1) The right of pre-emption is conditional on the claimant not having been given the option of purchasing the property, before the sale to the stranger took place, (2) co-sharers in the same village have a right of pre-emption against a stranger, (3) relatives within the third degree have a right of pre-emption against co-sharers and others.

In the case of an undivided joint family the name of the manager only is ordinarily entered in the *phánt* or roll of revenue-paying proprietors. The others holding jointly with him are known as *shikmi hissedárs*. According to the Mitákshará which is supposed to regulate customs connected with Hindu Law in Garhwál, the whole estate is liable for debts incurred by the manager of the undivided joint family, while each of the members, having only an undivided share of the whole and not full proprietary rights over any part, is unable to alienate his portion of the inheritance (Maine's Hindu Law, section 327). The only remedy against this lay in partition. But in the hills the *shikmi hissedár* has always been permitted to exercise full proprietary rights over his nominal share of the inheritance and to claim that his portion shall not be held responsible for debts due from the manager, unless he is specifically mentioned as liable in the decree. A fraudulent use is frequently made of this power, particularly in the case of private sales.

Joint or *shikmi hissedárs*.

Partition of common land of the village is usually made in proportion to the quota of revenue paid by each, and must be made in this way unless the specific share of each appears in the record. There is, however, a species of division known as "*Mowári bánt*" or division by families, by which each family obtains an equal share of the common land.

Partition.

In early times the abandonment of holdings was common. At present owing to the increased value of land, a holding is seldom left vacant except from the death without heir of the owner. In such cases the old custom as described by Mr. Traill is still followed: "When a share in any estate may lapse from death or desertion it is divided among the remaining proprietors who become answerable for its assessment; but this responsibility is generally speaking far from being deprecated, as the landholders are for the most part anxious to enlarge their petty tenures." The settlement agreement of 1862, also reads: "If a cultivator abandons his holding in the village, or dies without heir, or whose heir by reason of tender age cannot cultivate the estate, such land shall, until partition, be cultivated by the villagers through the *padhán*."

Abandonment of holdings.

48. But the most noteworthy customs relating to proprietary holdings are connected with succession.

Succession.

In default of sons, the widow as elsewhere succeeds to the inheritance for life. Alienation of the estate by her to liquidate the real or pretended debts of her husband forms the basis of many suits. With a view to forestall and avoid litigation, it was formerly the custom for the widow wishing to alienate land for this purpose to apply to the district officer, who, after a short enquiry, if the circumstances justified, made an executive order permitting her to do so.

The widow.

The daughter's position in the hills is much weaker than under ordinary Hindu Law. Though decisions such as Bahádur Singh and others of Mathána, Ringwársyún, *versus* Parsbadi, 28th August 1885 (Mr. Ross, Commissioner) and Kura of Talli Kolri, Khátli, *versus* Lálu, 3rd May 1892 (Mr. Roberts, Commissioner) have declared the daughter entitled to succeed in preference to unrelated co-sharers of the village and distant relatives, still her right is not generally recognized by the people themselves. It is the custom for a man who has no son to marry his daughter to a son-in-law who agrees to live in his house and who is known thereafter as the *ghar-jawáin*. In such a case the daughter takes her father's inheritance, but should she

The daughter.

The *ghar-jawáin*.

go into her husband's house, the inheritance usually descends to the nearest male heirs of the deceased. Even in the case of a *gharjawāin* the relatives frequently make a strong fight for the property, especially if the marriage has been arranged by the widow after the death of her husband. In such cases, it is not uncommon for the widow to go through the form of selling the land to the *gharjawāin* on the pretence that the sale proceeds are required to repay him the cost incurred in settling her husband's debts.

Sautiyā bānt.

It is not infrequent for a well-to-do man to have more than one wife. In such cases the inheritance is occasionally divided according to the number of wives, each son taking according to his mother's share instead of according to the number of sons of the same father (*bhāi bānt*). As a *bona fide* instance of this species of division the case of Rattan Singh of Thaplyāgaon, Gagwārsyūn, *versus* Sibbu and others (20th July 1869, Sir H. Ramsay, Commissioner) may be cited. But *sautiyā bānt* is the exception not the rule. In 1861, Sir H. Ramsay ruled on the case of Nand Ram and others of Chandol Rain, Nāndalsyūn, *versus* Bhajan Datt and another: "In the absence of a will *sautiyā bānt* cannot be made by the courts," and again in the case of Sher Singh of Kirsāl, Taili Chāndpur, *versus* Rattan Singh (9th August 1876): "In the absence of a written agreement or will, or the strongest evidence, a *sautiyā bānt* ought not to be given." And in 1886 the Board (Mr. Daniell) reversed a decision of the Commissioner (Mr. Ross) in the case of Rabi Datt of Kwirāli, Idwālsyūn, *versus* Able Ram and others (6th July 1886), holding that *bhāi bānt* is the law and *sautiyā bānt* should not be allowed "unless any valid authority is proved to exist which alters the law in a particular case." The required authority is usually a division made by the father in his lifetime, or a will, or the most undoubted proof of the custom of *sautiyā bānt* in the family, such as the fact of its having been allowed in specific cases before. But so far as I am aware, in no case has this species of division been allowed on evidence of the latter class alone. In the case of Padmu and others of Gahar, Paidūlsyūn, *versus* Shib Datt, the defendant was the son of one wife and claimed half of the inheritance, while the plaintiffs, three sons of two wives, demanded *bhāi bānt*. The attestation of existing possession showed that the defendant was in possession of half the share, and from this a *sautiyā bānt* made by the father was inferred (Sir H. Ramsay, 5th December 1877). Similarly in the case of Gunga Datt of Budoli, Gagwārsyūn *versus* Bhajan Datt and others, *sautiyā bānt* was inferred from existing possession of long standing (thirteen or fourteen years) and a new division refused (Mr. Roberts, Commissioner, 12th September 1892).

The *bhauj*.

In all but the very highest castes in Garhwāl it is the custom for a man to take into his house as his wife, the widow of a deceased elder brother (*bhauj*). In such cases the woman is regarded as equal to a lawfully married wife and offspring as legitimate (*asth*) children, but if the *bhauj* continues to live in her deceased husband's house, she is looked upon as a mere concubine and the issue is illegitimate (*kamasth*) (Kripal Singh of Pharkandai, Iriyakót, *versus* Partāb Singh, Mr. Giles, Commissioner, 15th July 1891). In part of Malla Salān, pattis Khātli and Bangārsyūn, the son of a *bhauj* is not allowed to take rice with his kinsmen though otherwise under no disability. The term *bhauj* like the term *bhāi* is somewhat loosely used, and is applied to the wife of a cousin and sometimes to the wife of a distant relative, though not usually so if resident in a different village. In such cases, however, the right of the son of a *bhauj* as such, usually becomes merged in the narrower right which is sometimes recognized, of an illegitimate son to succeed to his father's inheritance in default of other issue.

The *tekwa*.

Occasionally in some Khasiya villages, the whole of the deceased's property is made over to another man, on the condition that he lives with the widow as his wife. This second husband is known as *tekwa*. The reversioners, by this arrangement, give up their claim to any part of the deceased's property. The practice is regarded as a somewhat immoral one.

Primogeniture has been claimed by a family of Kyárk Idwálsyún, but not proved.

Primogeniture.

Among the various castes of *jogis*, known as Giri, Puri, Náth, Bairági, etc., the succession lies to the *chela* or disciple, not to the son. This is not improbably a remnant of the time when this class was celibate. At the present date celibacy is seldom observed, while a large number, particularly near Srinagar, are mere cultivators, and only to be distinguished from others by their orange-coloured dress and the custom prevailing amongst some of them of wearing large wooden rings in their ears.

Succession to *jogis*.

49. At the outset a distinction must be made between *kháekars* in a village held entirely by *kháekars*, and *kháekars* in a village in which the *hissedárs* have *khudkásht*, which is the modern form which the under-proprietary and occupancy rights have respectively assumed. In the former case (to quote Mr. J. R. Reid's words in the case of Padmu and others of Timli, lagga Páli, Khátli, *versus* Gauri Datt and another, in an order dated 28th March 1889, as Commissioner), "the *kháekars* alone have a right to arrange for the cultivation, pasturage, etc, including the succession to land lapsing owing to the death, heirless, of *kháekars*, the breaking up of waste, etc., while the *hissedárs* have no right beyond the collection of revenue, cesses and *padhánchári*." It would be hardly necessary to give instances, by quoting cases, of such a well known and well established principle, were it not that owing to the absence of any written law on the subject of these tenures, and to the unscrupulousness and untruthfulness of litigants, new authorities are apt, merely from inability to ascertain the correct custom, to give decisions absolutely opposed to all recognized rights. It is sufficient to give one such instance. The village of Milai is held entirely by *kháekars*, who pay revenue to the *muáfídár*. At last settlement the *kháekars* who represent the old cultivators who have sunk into tenants of the grantee were recorded as proprietors in consequence of their independent position. On appeal they were subsequently reduced to the position of *kháekars*. But there could be no question of their under-proprietary right or the fact of their holding the whole village. Balmukand the present *muáfídár* sued a *kháekar* Lalmani for recovery of possession of land broken up by the latter, on the ground that it was his *khudkásht* (a perfectly preposterous plea; a similar suit had in fact been dismissed in 1888) and by some means or other got a decree. The defendant in appeal pleaded that the whole village was in possession of *kháekars*, and that the *muáfídár* by custom could only take the *malikáná* and had no right to interfere with the cultivation. The Commissioner, however, refused to modify the decision (5th May 1893) and an appeal to the Board of Revenue met with the same fate (2nd September 1893), though in the case of Padmu *versus* Gauri Datt, quoted above, the Board had themselves decided that the *kháekars* in a similar village were entitled to the possession of land which the *hissedárs* had actually partitioned out amongst themselves. The cases of Khushal Singh of Dyúna, Talla Dora *versus* Lachi and others (June 8th 1889), and Gangapúri of Mangaon, Dug *versus* Parsi Sáh (December 20th 1893), both of which went up at one time or another to the Board are perhaps the leading cases on the subject of the holdings of *kháekars* in villages held entirely by *kháekars*. Both are Almora cases and in both the custom was held to apply not only to principal but also to *lagga* villages held entirely by *kháekars*, when there was any evidence that the *kháekars*' holding represented an old under-proprietary tenure. They both refused to the *hissedár* the right to resume the land of an heirless *kháekar* and in both cases it was decided that the land should go to the common body of *kháekars*. The principle is, however, by no means a modern one. Sir II. Ramsay mentions it in the Settlement Report of Kumaun, and a judicial decision by him to the same effect exists in Harak Singh of Chyúrkot Sabli *versus* Devi Datt (26th June 1882). Again in the case of Kaira and another *versus* Dalip Singh and another of Jukani lagga of Bangár, Sábli, in which the *hissedárs* wanted to divide among themselves the unassessed waste land of the village of Jukáni held entirely by *kháekars*, Sir H. Ramsay ruled: "Since all Jukáni is in possession of *kháekars* the unmeasured land will not be divided amongst the *hissedárs*" (30th November 1877). In the case of Banwá and another *versus* Bála Datt, of Rauthiya, Chalansyún, in which the defendant, a *hissedár*, got a deed of relinquishment from a *kháekar* in a village held entirely

Present position of the *kháekar*.
Succession.

by *kháekars*, and the plaintiff, a *kháekar*, sued for the land, Mr. Ross, Commissioner, ruled: "The *hissedár* cannot get possession of any *kháekar* land. If a *kháekar* wishes to give up any of his land, it must go to the other *kháekars*." It was also ruled that the *hissedár* had no right to cultivate unmeasured land in the village (9th April 1838). Nor does the *hissedár* improve his position by obtaining by fraud or collusion the cultivating possession of land in the village. It has been laid down in the case of *Devi Datt versus Prem Singh and others*, decided by Mr. J. R. Reid, Commissioner, on 9th January 1889, that a *hissedár* so obtaining land is on precisely the same footing as regards rights and privileges as any other *kháekar*, and that the land so cultivated is not equivalent to *khudkásht* nor does it affect the under-proprietary rights of the other *kháekars*.

Succession in proprietary villages.

50. In the case of villages in which the *hissedárs* have land in their own cultivation or *khudkásht*, the *kháekar's* land, in the event of his leaving no heir, or collateral in cultivating possession, reverts to the proprietor. This reversion was noted in the last settlement agreement, though not the reversion to the body of *kháekars*. In the case of *Ude Singh* in 1876 this matter was discussed between Mr. Colvin, the Officiating Commissioner, and Mr. Beckett, the latter explaining that the agreement was a "mere form." The *kháekar* may also relinquish his land at any time by a deed of relinquishment (*ládáwá*) executed in favour of his landlord, but not to the prejudice of his partners in the holding. Thus in the case of *Choti versus Jivanand*, of *Upráinkhet*, *Bachhansyún*, the plaintiff, widow of a deceased *kháekar*, sued to cancel a *ládáwá* given by her eldest son to the *hissedár* defendant, as she had a younger son. Sir H. Ramsay ruled: "If *Paunlyá* did not wish to cultivate the land, his younger brother had the right to all, and *Paunlyá* had no right to give it up by *ládáwá*." The deed of relinquishment was accordingly cancelled (4th September 1878).

As regards the right of relatives to succeed, no doubt has ever been expressed as to the son's right. The daughter's right is more doubtful, though in the case of *Musammát Sauni* and another *versus Parsádu* and others, *Pauri*, *Nándalsyún*, the plaintiffs sued to succeed their mother as *kháekars*, and got a decree which was upheld by Colonel *Erskine* on appeal (19th May 1890). In a former case a nephew had been preferred to a daughter and a daughter's son, even when the latter were supported by the proprietor, while still earlier cases had declared the nephew incapable of succeeding at all; facts which only show the necessity for a clear exposition of existing rulings. The daughter's right is no doubt a highly equitable one, and would apply *a fortiori* in the case of a *gharjawáin* and daughter's son, though it can hardly be said that the rights of either are generally recognized. The fact is that nine out of every ten hillmen are *hissedárs*, and every curtailment of the right of succession to the *kháekar* is to their advantage, as it brings in more lapsed holdings, which can now be let out at far better profit than twenty per cent. on the revenue. As regards heirs other than descendants, the widow has an undoubted claim to succeed in the absence of sons, and in this is preferred to the daughters. In the case of *Rattan Singh versus Dhaunkalu* and others of *Sirwáná*, *Iriyakot*, the plaintiff *hissedar* sued to obtain land from the defendants cultivating on behalf of the deceased *kháekar's* widow, Sir H. Ramsay ruled: "While the wife of the deceased *kháekar* is alive this claim is inadmissible" (9th May 1872). Collaterals, as a rule, are only allowed to succeed if they share in the cultivation of the holding (*i.e.*, are what is known as *shíkmi*). There are no definite rulings on the subject, but Mr. J. R. Reid has expressed his opinion that section 9 of Act XII of 1881 might fairly regulate succession in this case. The right of an adopted son to succeed would not be worth noticing were it not that it was denied in several cases by Mr. Ross while Commissioner. Sir H. Ramsay, however, in the case of *Kámrup versus Narain Singh*, *Kirkhu*, *Mawálsyún* (1st February 1882), clearly upheld the right of an adopted son to succeed, and in the cases of *Sri Ram* and another *versus Gaje Singh* of *Bhawain*, *Khátsyún* (9th September 1892), and *Kirpa*, of *Ghiri*, *Kapholsyún versus Kedáru* (1st August 1894) this view has been reaffirmed. Succession by relatives other than those mentioned can take place with the consent of the co-sharer but not otherwise, but this may be regarded rather as a renewal of the *kháekari* right than a continuation of it.

51. The right of a *kháekar* to cultivate and hold unmeasured land in a village in which the measured land is not held entirely by *kháekars* has been doubted. In the case of Fateh Singh *versus* Hansu and others, of Dyúr Khadora, Malla Nágpur, the plaintiff was a *hissedár* and the defendants *kháekars* cultivating in the same village. The latter had cultivated unmeasured land and the former sued for possession. The court of first instance gave a decree. Sir H. Ramsay reversed the decision in an order which has always been regarded as the Great Charter of *kháekar* liberties. "This claim for waste land is nothing more or less than an attempt to establish a *zamindari* right within the village boundaries. The *kháekars* of the village are old *maurúsi asámis*. Waste unmeasured land is the joint property of Government and the villagers. If it were deemed advisable to establish a *nayábád* or to preserve a block of jungle, Government has the right to do so, though such waste land is left uninterfered with, if it is not required by Government. The recorded *hissedár* has no right to claim *hissedári* during the currency of the settlement in jungle land brought under cultivation by the *kháekar*. He may cultivate new land if he likes, but he cannot claim rent on land, which does not belong to him" (4th February 1882). At the present settlement all *kháekars* have been recorded as such in unmeasured land found in their possession.

"The *kháekari* right is only heritable, not transferable." This was definitely laid down by Colonel Fisher, as Commissioner, in the case of Suráj Singh *versus* Amardeb and others, Gurársyún (2nd February 1855). The defendants were *kháekars* in a village held entirely by *kháekars* and sold part of the *kháekari* land. The plaintiff *hissedár* sued to cancel the sale, and failed to get a decree. Colonel Fisher ruled on appeal: "The respondents can sublease their lands, they cannot transfer them by gift to others." This of course holds *a fortiori* in proprietary villages. In these, however, the right to sublet has been by no means always acknowledged, decisions having been sometimes given to the effect that if a *kháekar* cannot cultivate all his land it is his duty to resign it to the proprietor. But in the case of Bakhtáwar Singh of Chamlán Khátli *versus* Kaulú and another, where the *hissedár* sued to recover land so sublet, Mr. Ross in appeal ruled: "The proprietor cannot interfere. Kaulú is the *kháekar* and he can cultivate through whom he likes. At Kaulú's death, Rattanu's tenancy will cease, and Kaulú's heirs, if any, will succeed, or the land will lapse to the proprietors" (19th September 1887).

It is a very general practice for *kháekars* to give cultivating possession in some of their land, as security for the payment of a loan, that is to say by deed or verbally they mortgage their holdings. In the case of Dhán Singh *versus* Makandu, of Kot, Sitonsyún, the defendant, a *kháekar*, [similarly mortgaged land to various people, and the plaintiff *hissedár* sued to recover the land. The court of first instance (Col. Garstin) after examining the papers found that two of the mortgages had been recorded in the settlement papers, that there was hardly a tenant in the village but had some land mortgaged, that the plaintiff admitted that the custom of mortgaging for a short time was a common one, and that if the defendant would redeem in a short time he would not object. Plaintiff was given a decree that if defendant failed to redeem in two years he might redeem himself. Sir H. Ramsay in appeal ruled: "As there is no special clause in the settlement agreement, and the whole village does not appear to be in the hands of *kháekars*, I do not see why the *kháekars* of Kot should be different from others. If they can mortgage they can sell. Therefore any mortgage that *kháekars* can make must be purely nominal, and can convey no right to any other, of the *kháekari* land he holds" (22nd August 1873). The order was cancelled and the plaintiff given immediate possession. No more recent case has occurred, but it is difficult to see why the *hissedár* is prejudiced in a case of this kind any more than by a sublease of the holding, and the commonness of the latter custom is evidenced by the record of the former and present settlement. In either case the occupancy must terminate with the real *kháekar's* death, and as there can thus be no unauthorized prolongation of the *kháekari* tenure, the *hissedár's* reversionary interest remains unimpaired.

At the last settlement the miscellaneous dues payable by custom from *kháekars* to *hissedárs* were commuted into a fixed rate of 20 per cent. on the land revenue, the

Miscellaneous points of *kháekari* right.
Right of *kháekars* in unmeasured land.

Right to sublet and mortgage holdings.

Rent of *kháekars*.

kháekars paying to the *hissedárs* this amount in excess of the Government revenue. In the following villages this percentage was, however, departed from :—

Pargana	Patti.	Village.	Amount.	Remarks.
Chaundkot.	Gurársyún	Rhairgón lugga of Koligón ...	10	Per cent.
		Chaidbár ...		
		Daheli ...		
		Kirshál ...		
		Páli Malli ...		
	Maundársyún	Sanglakoti ...	40	Per cent.
		Amota Sera ...		

At the present settlement the amount has been equalized to 20 per cent. in every case.

Ejection.

The ejection of *kháekars* can only take place on a decree of Court which is usually only made in case of proved inability to pay the assessment, for instance, non-satisfaction of a decree for rent. It thus happens that the ejection of *kháekars* is almost unknown. The *hissedár* is also very cautious in interfering with a *kháekari* holding unless armed with a *ladáwá* as it generally ends in his being mulcted in costs.

Present position of the *sirtán*.

52. The points which have been most contested regarding the tenure of the *sirtán* have been the permanence of his holding and his liability to ejection. As regards the right of *sirtáns* of long standing to a permanent occupancy, the most various rulings have been given at different times. In the case of Moptá and others of Bajyún, Talla Nágpur *versus* Kitalu, the plaintiffs who had held land as *sirtáns* since 1840 if not earlier, sued in 1874 to have their holding made a *kháekari* one. The Court of first instance held that plaintiffs should have sued within three years from settlement to alter the entry. "Act X of 1869 is not in force in this district, and therefore length of tenure does not give an occupancy right." There is a want of sequence in the reasoning, but Sir H. Ramsay affirmed the decision (21st April 1874). On the other hand, in the case of Parmanand and another, *versus* Biju and others of Jaspur, Dhaundyálsyún, the plaintiffs, *hissedárs*, sued to recover land from *sirtáns*, Biju and others, whose names were not entered in the settlement papers. It was found that the latter had held more than thirty years, and therefore "by the law of limitation" could not be disturbed. Sir H. Ramsay dismissed the *hissedárs'* appeal (15th January 1884). Finally on 24th August 1885 it was decided by Mr. Ross that the defendants having virtually an occupancy tenure were only liable to pay rent as *kháekars*. Thus the transformation was made complete.

The famous decision of Lál Singh *versus* Amar Singh and others, given by the Board on 22nd September 1887, finally decided that *sirtáns* could not obtain occupancy rights by length of tenure. The plaintiff sued to eject the defendant, a *sirtán* who had held over twelve years. The evidence was chiefly of a negative character, but it was found that there was nothing to shew that *sirtáns* obtained occupancy rights after twelve years possession, and Mr. Daniell accordingly held that "the Commissioner's decision is contrary to usage in Garhwál, and must therefore be reversed." This decision was held to govern all cases till 1891, though it would appear that the Board did not intend a strictly literal interpretation of the ruling that *no length of tenure whatever* would confer occupancy rights, by the case of Ratti Ram *versus* Sher Singh of Amkoti, Nándalsyún, in which the plaintiff, a *sirtán* who had held since 1857, sued to establish a right of occupancy and got a decree which was confirmed by the Board on the 6th January 1890. In the case of Uttim Náth *versus* Murthi, of Ámri, Malla Dhángu, however, the plaintiff, a *sirtán* ejected from waste common land broken up by him since settlement, sued for reinstatement. On the 16th January 1889 the Commissioner Mr. Reid ruled: "There is no law or custom in Garhwál that leaves an occupancy and improving tenant at the mercy of the so-called landholders. The first principle of the land law in Garhwál is that in settled and assessed lands only have the so-called landholders complete and undivided proprietary rights....Landholders so called have therefore no preferential claim to land broken up by cultivators without aid from them, and if those cultivators remain in possession for a sufficiently long time unopposed by the landholders or with their consent, the landholders have no title to eject them." The Board in upholding this judgment observed: "The fact appears to be that when

Messrs. Traill and Batten and to some extent also Mr. Beckett made their settlements, tenants were scarce in the hill tracts and the question of occupancy rights received little attention. ... The *sirtán* is a purely temporary occupant of land and must not be confounded with tenants who have broken up and brought under cultivation waste land, and have continued to occupy uninterruptedly through a long series of years" (20th January 1891). It is a curious instance of the way in which each case of tenures is settled as it arises in Garhwál by a reference to first causes, instead of according to established precedent, that when it was desired after the above ruling to ascertain in what way *hissedárs*, *kháckars* and *sirtáns* should be recorded in unmeasured land in their possession at the present settlement, this was done by calling together the people of several patts and asking their opinion on the subject. The opinion as to the right of *sirtáns* in waste land was that they should in all cases be recorded as *sirtáns*, and this was accordingly done, till the Senior Member Mr. Reid came to know of the matter in 1893 and altered the arrangement according to the ruling in the above case. *Sirtáns* who had cultivated blocks of new land and had been in possession thereof for a number of years were to be recorded as *kháckars* in such land.

53. The last settlement agreement contained a clause to the effect that each *hissedár* had the power to make over his land to a *sirtán* and to take it back from him. After the decision in the case of Lal Singh noted above, the Commissioner, Mr. Ross, issued a proclamation stating very emphatically that according to the Board's ruling the *hissedár* might "dispossess" (*bedakhaí karná*) a *sirtán* whenever he pleased. A *sirtán* was further defined as any tenant not recorded as a *kháckar* at settlement. It was also added that when a tenant of long standing is "dispossessed" he is entitled to receive the value of any improvements made by him, and is not to be ejected till he received such in full. But this last condition appears largely to have escaped notice, and the curious spectacle was often seen of a tenant forcibly dispossessed without payment for improvements, suing to be reinstated and being told to sue for compensation. Should he sue for both at once, his restoration to his holding was frequently made contingent on the non-payment within a fixed period by the *hissedár* of the sum determined as cost of improvements, and in the event of payment of this sum the costs of the suit were sometimes thrown on the tenant. In another case tenants who failed in a suit to establish their right of occupancy in the land found a decree given against them for mesne profits from the date of the dismissal of their suit. There is even a case of the Commissioner's Court extant in which the plaintiffs, *sirtáns*, on suing to be restored to the holding from which they had been ejected without payment of compensation, were told that as they had no right of occupancy they had no remedy in a Revenue Court (*Bijlia and others versus Mahendra Singh and others, of Mirchora, Aswálsyún, 3rd May 1892*). Mr. Ross never gave this interpretation to his proclamation himself. In the case of *Rattanú versus Kaulú of Chamlán, Khátli, the plaintiff, a sirtán* who had been dispossessed, sued for reinstatement and got a decree. Mr. Ross upheld the decision observing: "They (*i.e.* plaintiff) have no legal right to maintain possession but they have full legal rights to recover compensation for the improvements they have made, and until such amount has been settled and paid into Court they cannot be ousted" (15th August, 1885). The older procedure was similar. In the case of *Kannu versus Debuá, Panaun, Choprákot, the plaintiff, a sirtán*, sued to be restored to his holding from which he had been forcibly ejected. He was given a decree for possession until he received the cost of improvements, and Sir Henry Ramsay upheld the decision (4th September, 1878). The *hissedár* was thus left to sue for ejection and determination of compensation, and the latter was assessed at Rs. 465 to be paid in one month. In several cases of recent years the old procedure has been upheld *e.g.*, *Puniya versus Kundan Lál, Rail, pargana Páli, Almora (Colonel Erskine, Commissioner, June 20th, 1890)*, *Deb Singh versus Asárú, Naugáon, Maundársyún (Mr. Giles, Commissioner, August 10th, 1891)* and *Jogia Bhul of Baináli, Kairáru, Almora, versus Dungar Singh and others (Colonel Erskine, Commissioner, December 11th, 1893)*. In all these cases *sirtáns* summarily and forcibly ejected were restored to possession. In the first of the three cases Colonel Erskine observed: "In my opinion a landlord cannot forcibly eject a tenant and thus throw upon him the *onus* of

Ejection of *sirtáns*

suing for the value of his improvements. If he does so, the tenant can sue for and recover possession under section 9 of the Specific Relief Act. The proper course for a landlord to follow, if he desires to eject a tenant who will not vacate his holding, is to sue the tenant. In this suit any objection which the tenant may raise regarding his right to compensation for improvement can be gone into, and if the Court finds that the tenant is entitled to compensation, it can fix the amount and give the landlord a decree for ejection of the tenant, subject to the prior payment of the sum assessed as compensation." Regarding the assessment of compensation, Mr. Roberts ruled as Commissioner that "the mere up-keep of the fields in the ordinary condition suitable for the cultivation of measured land is not a ground for award of compensation." "Compensation can only be given for such improvements the full benefit of which the respondents have not reaped" (Pancham Singh and others *versus* Rishmu and others Dalgáon Kháti, 28th August 1893).

Miscellaneous points regarding *sirtáns*.

54. More than half of the *sirtáni* holdings in Garhwál are held by literal *sirtáns*, *i.e.*, payers of the *sirti* or land revenue alone. This may result from an exchange of land for cultivation between *hissedárs*, or from a *hissedár* cultivating in common waste. In other cases near relationship or friendship induces one man to give another some land to cultivate, or in new or unproductive villages he may be brought in to aid in the cultivation and so eke out the Government revenue. Usually the feudal dues, *bhent* (consisting of Rs. 2 on the marriage of a daughter), *dastár* (a leg of every goat killed, a *ser* of ghi in Sáwan and a basket of maize yearly), and in some cases also *pithái* (a nominal rent of one or two *timásis* yearly), are paid to the *hissedár* of the land even when no competition rent is taken. The competition rent where it exists is usually *tihár* or a third of the produce in good land and *chauthá* or a fourth part in the inferior. In the best *será* as much as a half is taken. Money rents are rare except among the tenants of tea planters. In Chirangá, Pindarwár, I was told that four *nábis* to the rupee, or Rs. 5 per acre, was the rent rate.

Acquisition of occupancy rights.

The acquisition of an occupancy tenure by *sirtáns* is now usually obtained by registered deed, accompanied by the payment of a premium (*bhent* or *jotái*) to the *hissedár*, the amount of which is usually about half the selling value of the land. At the time of settlement, however, occupancy tenures are created by the *hissedár* and *sirtán* agreeing that the latter shall be recorded as a *kháekar* in the new papers. From a decision of Sir Henry Ramsay (Sarbal Singh *versus* Rattanu and another, Hitoli Aswálsyún 1866) it would appear that the *hissedár* is not subsequently entitled to rescind the bargain then made.

Present position of the *padhán*.

55. The *padhán*, from the fact of the Government revenue being paid through him, was also known as the *málguzár*. Where the same cultivators held land in several villages situated close together, all were usually included in one engagement, and only one *málguzár* was chosen for all. The principal village in which the cultivators or most of them resided was known as the *astí*, or original village, and the minor villages as *taggá*, or attached. In some cases, however, the same *málguzár* was appointed for two distant villages, as, for instance, for the reason that the lease of the second village had once been issued in his name. In this case one of the residents of the latter village was usually appointed by the *málguzár*, with the consent of the District Officer, as his agent or *mukhtyár*. A similar agent was appointed in cases where the *málguzár* was a minor or a woman. Neither of the two latter descriptions of persons would have been appointed by Mr. Traill, and, considering the duties that have to be performed, the appointment of women to the post is certainly curious, and the *mukhtyár's* position in such cases is the subject of the most objectionable intrigues. But with the tendency of the Garhwáli to convert all offices into private property, the position of *padhán* has come to be looked on more or less as an adjunct to the deceased's land, and the claim has been somewhat weakly given into by District Officers. The purchaser at auction or otherwise of the *padhán's* land almost invariably claims the office along with it. In both cases the *mukhtyár* is considered competent to perform all acts for the real *padhán*, though his liability to be ousted at the will of the latter prevents his holding the same authority or *prestige*. In other cases, where villages were held entirely by *kháekars*, as it was necessary that the rent of *kháekars* should be

paid to a *hissedár* and the revenue paid by the *hissedár* to Government, it was impossible for a *kháekar* to be appointed *málguzár*, and therefore a non-resident proprietor had to be appointed to the post. Owing to the under-proprietary right in this class of villages, and the fact that the *hissedár* having no cultivation there could not become resident, a special official chosen from among the *kháekars* with the title of *ghar padhán* was appointed for the collection of the land revenue. He, as a rule, enjoys the *padhánchári* land, and pays the Government revenue direct to the *patwári*, paying the *hissedári* dues alone to the proprietors. The position was originally one of considerable independence, but the tendency has been to class the *ghar padhán* more and more with the ordinary *mukhtyár*. In the case of *Uttimu versus Mahendra Singh of Baret, Talla Kaliphát*, the plaintiff, a *ghar padhán*, sued to recover the *padhánchári* land from the *padhán's* brother who had ejected him. The Senior Assistant Commissioner (Mr. Gardiner) dismissed the case, on the ground that the *padhán* agreed to live in the village in future. Sir H. Ramsay restored *Uttimu*. He held: "Respondent is *padhán* in another village and he cannot live in two villages. Appellant was made *ghar padhán* after Mr. Beckett had ascertained all the circumstances of the case, and I see no reason for setting aside his decision." He also observed: "Such cases could not be set aside by the *padhán* agreeing to stay in the village. He would come for six months and go away again." "If the *padhán* has the right to take the land he will say he can appoint his own *ghar padhán*" (17th August 1866). The inference of the last remark is that the *padhán* had no such power. A judicial decision to the same effect is not wanting. In 1880 the *kháekars* of *Kimothá* petitioned that the *málguzár* lived in the next *patti*, and that one of their own number, *Tára Datt*, might be appointed *ghar padhán*. This was done despite the protestations of the *padhán*, and Sir Henry Ramsay confirmed the appointment (11th November 1880). After the departure of Sir H. Ramsay, however, the authority of the *ghar padhán* was considerably curtailed, and when in 1885 a displaced *ghar padhán* sued the *málguzár* for restitution, Mr. Ross, the Commissioner, ruled: "The regular *padhán* with consent of all the *kháekars* has appointed respondent a *ghar padhán* and no one can interfere" (*Thobu versus Mádhavanand, Beri Talli, Síli Chándpur*, 15th August 1885). In the case of *Tej Singh versus Padam Ram of Kot, Khausar*, in which the plaintiff, the former *ghar padhán*, obtained an order against the *padhán*, disallowing the latter's appointment of a new man, Mr. J. R. Reid, Commissioner, ruled: "I understand that the appellant still remains the responsible *padhán* of the village and that the *ghar padhán* is only his agent or deputy. I don't see why he should be compelled to employ as his agent or deputy a man whom he doesn't wish to appoint or trust. Order cancelled. The man appointed as *ghar padhán* will be appointed if fit. The *ghar padhán's* tenure of office can only extend as long as his principal's, who if he is removed will be accompanied by his *ghar padhán* also" (29th November 1883). Mr. Giles as Commissioner subsequently interpreted this to mean that the *padhán* nominates and the District Officer appoints, but has a right of veto. A more recent ruling has, however, restored the *ghar padhán* to his old position. The responsibility of the original *padhán* in such villages, though it may exist nominally, is such a remote contingency as to be practically negligible. The name of the *ghar padhán* is invariably, and that of the agent or *mukhtyár* usually, entered in the revenue papers and no alteration can be made in the case of even the latter without reference to the District Officer.

The *padhán's* remuneration consists of the *padhánchári* land where such exists, or in cases where its revenue is less than five per cent. of that of the village, of a cess on the revenue up to this amount. The *padhán* is also exempted from personal service as a coolie, a distinction much prized throughout the district.

56. The power of the *thokdárs* was much broken down at last settlement. Mr. Beckett says: "They were at first revenue as well as police officers. Their revenue duties were transferred to *padháns*; and as police they were found to be much worse than useless. As it paid them best always to let off a criminal, they generally made themselves so obnoxious that in 1856, the Senior Assistants of Kumaun and Garhwál drew up a joint memorandum recommending that this class of officials should be

Present position of the
thokdár.

relieved of all police duties, and as far as possible be absorbed on casualties occurring, or at the next settlement." Accordingly at Settlement numbers of *thokdárs* were struck off and the remuneration of the rest fixed at the rate of three, six or ten *per cent.* on the Government revenue instead of the dues in kind previously taken. The Kumaun officer who recommended the abolition of *thokdárs* was Sir Henry (then Captain) Ramsay; but in 1874 he wrote: "Since that time I have been compelled to change my views . . . It was absolutely necessary to maintain *thokdárs* as far as possible, to ensure the due performance of police duties on the part of *padhâns*. The abolition of the office of *thokdâr*, which had existed so long, would be very unpopular with all except the democrats, who, more than others, required to be kept in check . . . Some of these *thokdárs* are gentlemen . . . They occupied a feudal place in the estimation of their subjects."

At present the *thokdâr's* duties are chiefly ornamental, though he is supposed to supervise the *padhâns* in their work as police. The office is therefore strictly hereditary and descends by the rules of primogeniture. But if there is no direct heir, one of the same family, usually the nearest relative, is appointed. The claims of women to *thokdâri* rights, though advanced as in the case of *padhâns*, are disallowed. The *thokdárs* comprise representatives of the best old families only, and are the only men who have any pretence to be called the aristocracy of Garhwâl. They are no longer, however, the feudal magnates of former times, and in fact are of very little more consequence than other cultivators. But they are the only body who preserve Garhwâl society from one dead level and as such deserving of continuance. Their dignity is somewhat increased by their position as police officers being held to entitle them to the possession of arms free of a license.

The principal families at present are the Bartwâls of Nâgpur, the Kunwars of Chândpur, the Aswâls of Sila (Talla Salan) and the Bhandâris of Chauthan. The Sajwâns of Sabli and Khâtli, and the Payâl Thâkurs of Gangâ Salân, the Kapholâ Bishts of Bârahsyûn, the Rautelas of Kauriya, the Jhinkwâns of Nâgpur and the Butola Râwats of Badhân are also much respected families though their heads have not the same prominence as the above. They are all Râjput castes.

Miscellaneous points in tenures. Coolies and *bardâish*.

57. "Owing to the contracted state of the population, the insufferable indolence of the male part of it, and their general aversion to carrying burthens, the nature of every species of labour in this province, whether on public works or in transport, has always been compulsory. Although various measures for the relief of the population have been from time to time devised, such as the purchase in 1822 of an establishment of mules (since abolished) at a heavy expense, for the purposes of public transport, and the increase of the rate of hire on the most liberal scale, the employment of the hill Khasiyâs in this service has been as yet in no degree rendered voluntary. The demands for this species of labour would appear calculated to benefit the lower classes of the people by affording them a never ceasing source of employment. The aid of the civil power has nevertheless been found to be indispensable in the collection of Khasiyâs, for public and private purposes." So wrote Mr. Traill, and though the state of population in Garhwâl is now by no means contracted, the difficulty in procuring labour for transport purposes remains as great as ever. Moreover in the interior there are few or no shops, and it has therefore always been customary that villages shall supply on payment, such articles of food, fodder and fuel as are necessary, to travellers and officers on tour in the district. For the last three settlements therefore a clause has been inserted in the settlement agreement whereby every landholder and cultivator is bound to supply coolies (labour) and *bardâish* (supplies) according to custom and the requisitions of authorized officers. With a view to obviate the inconvenience which would result from distant villages being called on in their turn to supply food to a single traveller, an arrangement was made at last settlement whereby the villages of one or more *pattis* agreed to appoint a single man as shopkeeper for all, remunerating him by a portion of grain at each harvest which varied in different parts. The amount of grain so given was measured by *nâlis* and the shopkeeper was thence called the *nâli baniyâ*. *Nâli baniyâs* exist in the more frequented *pattis* of Garhwâl. In others the people continue to themselves supply camps and travellers moving within their boundaries.

The *nâli baniâ*.

CHAPTER III.

FISCAL HISTORY.

58. The fiscal history of Garhwál cannot be better introduced than by the following extracts from Mr. Traill's reports, on the method of settlement under the Rájás.

Fiscal history under the native kings.

"The agricultural assessment, or *sirtee*, as originally fixed, was extremely light, and its rate and amount would appear to have been very rarely revised. To supply the increasing expenditure of the State, numerous other taxes were successively imposed on the landholders; of these the principal were a capitation tax and house tax, and the whole were summed up under the designation of *Chhutis rakam* and *Batis kalam*, or thirty-six items of royal revenue and thirty-two of ministerial fees. These numbers appear to have been used arbitrarily, as including the regular and contingent cesses. The total to which the landholder was liable never actually amounted to sixty-eight, though sufficiently numerous to leave him little beyond the means of subsistence. As the public demand was not regulated on any consideration of the produce, the relative proportions which they bore to each other, can only be estimated by the analogy of the rates paid to the free-holders by the *kháchar* or *káini* tenants. These varied in different districts from one-third to two-fifths of the gross produce."

Elsewhere he says: "The assessment on the land was, generally speaking, light, the Government demand on agriculture being rated at only one-third of the gross produce in ordinary lands and one-half in the very fertile." "The collection was made in two forms being imposed one year on the land and a second year levied by a capitation tax on the inhabitants. As these, however, consisted solely of persons connected with agriculture the source from which the payments were made was necessarily the same, though the mode and detail of cess varied." "Judging...from the very superior degree of cultivation and population which then existed, the sovereign's share of the gross produce of the country may be computed at...two [lakhs of *kachchha* rupees] for the district of Garhwál," *i.e.*, about Rs. 1,50,000 of the present money. This included the whole of the ordinary revenue from all sources. "The extraordinary revenue was levied in the form of a general house tax and of course varied in its amount according to the nature of the emergency on which it was imposed." A "general record of the arable lands of the country, their extent, appropriation, &c., was kept in the office of the *daftaris*. To render these accounts more complete these officers had deputies in each district, whose duties corresponded, in a great measure, with those of the *pargana kanúngos* in the plains. To defray the expenses of the establishment the *daftaris* were entitled to a percentage of half an anna in the rupee on the rent of every village; and for their own support, they received grants of land in common with the other public servants."

Of the nature of these records the following account is furnished: "The original records of *rakba* in this province were very imperfect, exhibiting a mere arbitrary estimate of the *rakba* of each village, calculated according to the quantity of seed which the arable land of such village was capacitated to receive. The estimates would appear to have been formed at a very remote period and to have never been afterwards revised, notwithstanding the gradual increase of arable land. A further cause of confusion in the records arose from the established practice of the former Governments of doubling the nominal *rakba* of a village when given in grant of *muáfi*, such augmented *rakba* remaining permanently fixed in the records subsequently to the assumption of a village so granted." "The adoption of so uncertain a standard is doubtless to be ascribed to the nature of the arable lands, the actual measurement of which would require greater perseverance and science than the natives of this province ever possessed.... In calculating the extent of villages, only such lands as had been rendered capable of cultivation" by terracing "were taken into consideration," "the waste and forest lands never having attracted the attention of former Governments and no computation of them having been made." "The records alluded to furnished at the same time no information as to the boundaries of villages; indeed the duties of the former *mofassil*

officers, answering to the pargana kanúngos of the plains, seem to have been confined to a mere registry of the names and *jama* of villages, and to keeping copies of the grants of the Government."

The Gurkha revenue system.

59. "Under the Gurkha Government a complete revision of the land revenue system took place. The cess on agriculture was considerably augmented, and most of the extra demands ceased. *Maukar, tandkar, mijhári, ghíkar, salámya* or *salámi*, and *sanya phágun*, or tax on houses, on looms, on doms, on pasturage, *nazrána*, and offerings on festivals, were alone retained, and the only ministerial fees which remained in force, were those to the kanúngos, the *kamin* and the *padhán*. The cess on agriculture was moderate, being imposed on the *rakba* at a determined rate, which was equalized in different districts according to the scale of measurement in force. All other assets and means of the landholders were attained by the extra cesses above mentioned, so that the gross demand became an income-tax on all classes connected with the land. By the injudicious mode of management introduced under the Gurkha Government (that of military assignments) the resources of the country were rapidly deteriorating, agricultural produce diminished, prices were arbitrarily depressed, and a year of excessive drought supervening the disposable capital of the agricultural classes was dissipated." The settlement had been made by a commission specially deputed from Katmandu, and "was formed on actual inspection of the resources of each village, but as the estimated profits of the trade carried on by the residents was taken into consideration, the assessment must be viewed rather as a tax founded on the number of inhabitants, than on the extent of cultivation. On the completion of the survey a detailed account of each pargana showing the numbers, names, size and extent of the villages was submitted for the approbation of the Court of Nepal. From thence a copy under the seal of State was issued to the *kamins* . . . as a standard of the revenue demandable from their respective pattis, corresponding instructions being issued to the officers holding assignments." The form of these accounts, with the amount assessed on Garhwál, was as follows :—

Name of division.	Land revenue.	Salámi (or <i>nazrána</i>).	Ghíkar (or tax on cattle).	Mijhári (or tax on doms).	Tandkar (or tax on looms).	Sanya phágun (offerings on festivals).	Adhanni dafári (or kanúngo allowances).	Sáyar of customs.	Támákhán, taksál or mints and mint duties.	Khuesál (or kul maháls).	Kárbáns (or timbers and bamboos).	Sáyar, exclusive of customs.	Asmáni firmáni (or estimated fines and forfeitures).	Total revenue in Gurkha rupees.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Garhwál ...	82,406	1,147	...	454	1,283	1,495	1,495	10,900	2,401	170	600	200	2,000	1,04,551

But, "The absence of a controlling power on the spot rendered the arrangement almost nugatory," and the military officers set at naught these assessments at their pleasure, exacting from the people as much as they were able; the *jama* imposed soon exceeded what the country could yield, the deficiency annually increasing from the attempt to enforce the full demand." In the last year of the Gurkha rule, the receipts fell considerably short of one-half the demand, and the two are thus given by Mr. Traill :—

	Demand.	Receipts.
	Rs.	Rs.
Bárahayán ...	12,018	4,577
Chaundkot ...	6,025	3,069
Dewalgarh ...	1,957	1,334
Nágpur ...	11,104	3,033
Gangá Salán ...	11,634	5,384
Painkbauda ...	4,700	1,750
Cháandpur ...	20,826	7,763
Badhán ...	9,902	3,612
Talla Salán ...	5,960	3,147
Malla Salán ...	7,132	4,037
Total ...	91,258	37,706

60. "On the conquest of the province [in 1815 A.D.], as a temporary arrangement, the revenue of each pargana was farmed for one year to the *kamin* or *sayana*. The receipts of the preceding year, as exhibited in the *kanúngo's* returns, were assumed as a standard, a deduction of twenty-five per cent. being allowed for the difference in currency." This constituted the first settlement.

Thereafter the settlement was made by villages. "The whole of the *padhás* of the patti or pargana under revision being collected, the sum total of their *jama* for the preceding period of settlement is given them for equalization among themselves, according to the present state of population and cultivation." To account for the necessity for this equalization it is explained that "a very extensive revision of the detailed assessment has been found indispensable at each succeeding settlement. The necessity has arisen from the contracted state of the labouring population, which renders it difficult for any *málguzár* to replace sudden casualties among his tenants. In the present state of minute village assessment, the death or desertion of even a single cultivator adds greatly to the burden of the remaining tenants; where further losses occur immediate remissions are generally made to save the village from total desertion. Such defalcations are supplied by a corresponding improvement in other estates, and as contingencies of this nature are best known to the surrounding *málguzárs*, the distribution of the pargana assessment has been hitherto entrusted to the *padhás* themselves." On the *jama* of the preceding settlement having been equalized, "the signature of each individual being affixed to the result, in corroboration of his assent to the justice of the estimate, the proportion of the gross revenue increase demanded from the pargana is then added to the assessment of each village at the rate of one, two, or three annas in the rupee, and engagements with the *zamindárs* are interchanged. As the parganas are small and the interference of native officers not allowed on the occasion, this mode is probably as fair and equitable as any which could be adopted."

The lease of the village for the term of settlement was "issued in the name of one, or at most two sharers in the estate" and these tendered for and paid the revenue of the whole village, whence the name *málguzár* applied to the *padhán* of the village.

As regards the distribution of the village revenue among the various co-sharers it is said that "the village *jama* is apportioned on the several shares agreeably to the nominal interest possessed by each in the estate. If any sharer claims an abatement on the ground of deficiency in the portion of land actually in his possession, a measurement takes place, and a record is made of the quantity of land found in the occupation of each proprietor, agreeably to which the future cess is regulated, but without retrospective effect. From damage by mountain torrents and from gradual encroachment on the shares of absentees inequalities of this kind are pretty general, and applications for measurement frequent" Except in case of disputes of this kind, no record appears to have been made of the share of revenue for which each co-sharer was liable. It appears to have been settled by the villagers themselves.

The term of the second settlement, on account of the novelty of the arrangements made for fixing the revenue of each village, was restricted to one year, (1816—1817 A. D.). "The success with which this experiment was attended and the punctuality with which the revenue was realized, led to an extension of the system in the third settlement, which was fixed for three years" (1817 A. D.). The fourth settlement (1820 A. D.) was also made for three years, and the remaining three of Mr. Traill's settlements for five years each (in 1823, 1828, 1833 A. D.). At each settlement an increase in the total revenue was obtained, though in the last two occasions it was small, while the system had the merits of cheapness and celerity. Mr. Traill is said to have completed his last settlement of Garhwál "in less than a month on the road between Hardwár and Badrinath."

The extra cesses retained by the Gurkhas were, with the exception of customs and *kátbáns* (timber and bamboos), abolished in 1815 A. D. The abolition of the former followed in 1818, while the latter item remained till taken over by the Forest Department at a comparatively recent date.

The settlements seem in all cases to have been based on the previous demand and collections from each village; in fact there were no other data on which an assessment could be based. For the first four settlements, there were no other records of the area and extent of villages than the native ones mentioned in § 58. In 1822 "a general measurement of the whole province was undertaken," on the same principle of estimating without actually measuring the area, more, however, as a record of rights than with any idea of regulating the revenue by the results so obtained, the Gurkha Government "by resuming all grants to individuals" having "rendered the ancient record nearly useless." The book contained for each village a statement of its nominal boundaries, an enumeration of the *tóks* of cultivation with the area of each (the varying standards that had previously prevailed being here reduced to one common unit, the *náli* of 240 square yards), and the names of the proprietors. The detailed results of the survey were bound up in separate books for each patti, each book containing an index of villages, and one copy was lodged in the office, while one was made over to the patwári. This constitutes the record familiarly known as the *assi sál*, which still, on matters of boundary, is regarded as the greatest extant authority.

Mr. Batten's settlement.

61. Until 1840, there had been no settlement for a period exceeding five years, and the assessments of 1840 comprised the first long term settlement of Garhwál.

In the beginning of 1837, Mr. Batten, a civil servant with experience of Settlement work in the plains, was placed in charge of Garhwál. By the orders of the Board he was considered as in direct charge both of the settlement and administration of Garhwál, in subordination to, not the Commissioner of Kumaun, but the Commissioner of Rohilkhand. Mr. Batten has described the difficulties he experienced in the attempt to frame "a complete settlement according to line and rule," after the manner of "a regular surveyed district" in the plains, with "neither a village map to help" him, "nor a record of area on which the slightest reliance could be placed." The method of settlement appears to have been a matter of much discussion, and the Board at one time proposed a detailed survey of the whole of Garhwál, on the ground that "the true object of the process would be the settlement of possessions, liabilities, rights and managements." Mr. Batten modestly deprecated a survey, on the ground that "the time occupied in such a work would be beyond all ordinary calculation, perhaps more than two years;" further, that a survey would mean "a great and certain cost to Government with but an uncertain hope of any commensurate advantage resulting either to the State or the people." He also stated that "for any purpose of recording possession and fixing liabilities, nothing short of a field map would be of the slightest service; that any new survey stopping short of the boundaries or at least of the culturable waste, of estates, would still leave the most frequent cause of disputes unsettled; and finally, that if pecuniary expense is to be incurred and long delays before settlement to be allowed, the more complete and unlike its predecessors should be the survey now made, as only on the ground of its completeness and beneficial results would the expense and the delay be at all defensible."*

Finally the idea of a survey was given up, and the whole settlement was made without any survey whatever; and in framing his assessments Mr. Batten, like Mr. Traill, took little or no account of the estimates of area made in 1822, and he attributed the disappearance of the difficulty of settlement to his rejection of the notion of forming his village settlement on comparisons of measurement rates or rather on rates *per* fractions of an acre guessed at but never measured. He was also much impressed by the casual circumstances of the villages, the quantity and quality of the land in which formed only one item in their revenue-paying capabilities. He says: "No one patti however small has one natural character for all its villages, and in fact each village has a separate character according to its height on the mountain side, vicinity or distance from the forests, situation on the mountain or in the valley, and, above all, its climate as caused by these circumstances." He mentions also the "moral obstacles" which "would be found to separate the different *mauzas*...more rigidly even than the intervening precipices."

* 7th August 1837, to Commissioner, Rohilkhand.

Mr. Batten's instructions were not to aim at enhancing the demand which had been fixed by the last of Mr. Traill's assessments, but to settle the land revenue in such a manner that no revision would be required for 20 years. A reduction of revenue was anticipated from this measure, and was in fact incurred, but not to such an extent as was expected. Mr. Batten's work was in reality a revision of revenue for each village, in the light of a personal inspection and an account, drawn up on the spot, of the number and character of the inhabitants and their sources of income and general prosperity. The method of assessment was exceedingly regular and methodical. Assessment statements in English were prepared for each village showing the area estimated at the *assai sal*, the estimated cultivation at time of settlement arranged in six classes—first, second and third class of irrigated and dry; the revenue paid by the village at the seven preceding settlements, with the fiscal history of subordinate villages included in the same lease, village statistics, &c. Mr. Batten was transferred to Kumaun in 1839 after he had been in Garhwál less than three years and he was consequently unable to make the inspection of the whole district himself. But for the parganas of Paínkhanda, Badhán, Chándpur and the greater part of Talla Salán he recorded elaborate assessment notes, regarding the situation of the village, the crops grown, the caste of the inhabitants and the trades carried on by them, or other sources of income, their prosperity or otherwise, whether progressive or declining, the abundance or deficiency of cultivators and other points of interest. There then followed a note discussing the proper revenue for the village. If the village was fairly good, the highest of Mr. Traill's assessments on it (usually the last) was sustained. If it was not very certain, the figures of one of the previous and lower assessments would be taken, which usually meant a decrease of one or two rupees. If the village was particularly flourishing an enhancement of one or two rupees was made on the highest of Mr. Traill's assessments. In the remaining parganas, the local enquiry was made by the Tahsildár or kanúngo, who gave his opinion about the proper sum, and also what the villagers offered to give, and the assessments in these cases seem to be usually of the nature of a compromise. The native officers attempted to follow in Mr. Batten's footsteps in recording assessment notes, but these are somewhat wooden and not so full.

It will thus be seen that Mr. Batten's assessments were substantially Mr. Traill's, the latter being carefully verified, however, and corrected in the few cases that were found necessary. The pargana distribution is compared in the annexed statement:—

Pargana.	Mr. Traill's settlements.							Mr. Batten's settlement.	Increase or decrease.
	1872 Samvat.	1873 Samvat.	1874 Samvat.	1877 Samvat.	1880 Samvat.	1885 Samvat.	1890 Samvat.	1896 Samvat.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Paínkhanda ...	1,550 0 0	1,550 0 0	922 0 0	1,039 12 0	1,091 0 0	1,275 0 0	1,304 0 0	1,294 0 0	—10 0 0
Badhán ...	3,571 4 0	4,250 7 0	4,556 10 0	5,781 4 0	6,422 0 0	6,821 0 0	6,948 0 0	6,788 0 0	—160 0 0
Chándpur ...	5,092 0 3	5,915 14 0	6,432 6 0	7,819 15 0	8,991 8 0	9,345 0 0	9,425 0 0	9,190 0 0	—235 0 0
Talla Salán ...	3,642 4 0	4,145 12 0	4,622 4 0	5,384 8 9	6,893 0 0	7,113 0 0	7,411 0 0	7,183 0 0	—228 0 0
Nágpur ...	3,289 0 0	3,979 13 0	4,324 5 0	5,280 12 0	6,016 2 0	6,175 12 0	6,392 0 0	6,372 0 0	—20 0 0
Gangá Salán ...	5,099 7 0	5,608 11 0	6,176 12 9	7,834 8 0	8,957 4 0	9,507 8 0	9,640 0 0	9,618 0 0	—31 0 0
Bárahayón ...	5,005 0 0	6,142 8 0	6,593 5 0	8,151 0 0	10,102 0 0	10,422 8 0	10,555 0 0	10,652 0 0	+97 0 0
Dewalgarh ...	1,695 9 0	2,243 8 0	2,868 11 0	3,445 1 0	4,206 8 0	4,367 0 0	4,442 0 0	4,530 0 0	+88 0 0
Chaundkot ...	2,222 0 0	2,602 15 0	2,908 12 0	3,269 8 0	3,880 8 0	3,950 8 0	4,052 0 0	4,065 0 0	+13 0 0
Malla Salán ...	4,023 8 0	5,341 13 6	6,043 4 0	6,959 6 0	8,340 8 0	8,748 4 0	9,076 0 0	8,990 0 0	—86 0 0
Total ...	35,990 0 3	41,782 5 6	45,648 5 9	54,995 10 9	64,900 6 0	67,725 8 0	69,254 0 0	68,682 0 0	—572 0 0

It is worthy of note that though at the time this settlement was made, considerable doubts were expressed as to its stability, and Mr. Batten himself anticipated that reductions to the extent of Rs. 1,500 to Rs. 2,000 would have to be made during its currency, the actual demand of the last year preceding the next revision was Rs. 69,274 or Rs. 20 in excess of Mr. Traill's highest figure, the increase being due to *nayáddá* leases.

In the other, however, and the most valuable portion of his settlement, Mr. Batten's work was all his own. He was the first to bring on record and settle the numerous conflicting claims for proprietary rights, customary dues, etc., which had till then been floating in the air. For each village a record was made of the shareholders, with the quota of revenue due from them, the under-proprietors or occupancy tenants, and other tenants whenever discoverable. This document was known as the *phard phánt*. All dues paid to *hissedárs*, *padhán*s or *thokdárs* were most carefully and accurately recorded, and obligations for the future laid down. The record of rights was limited by the absence of a field survey, but within such limits as existed the record formed a model for all future time. Mr. Batten himself regarded this portion of his work as "the crowning good of the revision of settlement."

Mr. Beckett's settlement.

62. Mr. Batten's settlement was made for 20 years, and before its expiration it was decided that the next settlement should be preceded by a survey, and Mr. Beckett, the Senior Assistant Commissioner of Garhwál, was made Settlement Officer.

The first actual measurement.

This settlement comprised the first actual measurement of the cultivated area that had ever been made. The measurements were made on the same system that had been usual in the verification of land in civil and revenue suits up to that time, and which had been applied by Sir Henry Ramsay himself as District Officer in Kumaun in 1852 to the measurement of the *sadábart* pattis of Kotauli and Mahryúri. Mr. Beckett has nowhere described the actual process of measurement, and so the description given by Colonel Pitcher, Director of Land Records and Agriculture, in 1888, may be quoted: "There are two surveyors and two chainmen... Arrived at a field, the chainmen measure its longest length and take one or more measurements for breadth, according to whether the shape is regular or otherwise. The surveyors sit a little way off, and as the measurements are called out, one man enters these latter into the *khásra* and works out there and then the area by mensuration, while the other plots the measurements by aid of a rough paper scale constructed by himself, on to the plan, and sketches in the contour of the field by eye; the next field is then taken." The chain according to Mr. Beckett was "a thin rope twenty yards long, which was divided by marks easily recognized, into half, quarters and tenths." "Every field, however small, was measured and numbered, and any one may readily be pointed out by reference to the *shijra* and *khásra*. Many contained less than ten yards and some villages have upwards of 3,000 numbers in the *khásra*. Under such circumstances it is not, I think, surprising that the cost of the work is close on eight annas *per bisi*." This, however, included the preparation of the record of rights, including the *khásra*, the *muntakhib* (a record showing all the fields under the name of their cultivators), the *tehríj* (a record giving the totals of the *muntakhib* for each cultivator), and the *phánt*, showing the holding of each proprietor and *kháckar*, and the revenue and cesses payable by him. It was very seldom that the records had to be faired out. Disputes seem to have been few, and when alteration in the record was required it was made in red ink. The survey was in charge of a Deputy Collector, who disposed of disputes as they arose and tested the entries in the *muntakhib*. "As regards the testing of the record" Mr. Beckett "was not quite satisfied that the work was perfect." "At the settlement many objections not entered in the *khásra* were made" to him, and in many cases he altered the record with his own hand. "In order that there might be no ignorance in so important a point as the record of rights, every cultivator was supplied at his own expense with a list of his fields... When each village was called up for settlement all mistakes discovered by aid of the *parchás* were corrected." Notwithstanding these precautions the record in some cases remained most inaccurate, fields belonging to one proprietor being entered in the name of another, and *vice versa*. In one village, Ringwári, the record has been subsequently altered by the courts in no less than seven cases for this reason. However, this is probably exceptional. Mr. Beckett states that "Mr. Muir, on his tour as Member of the Board, tested one or more of the *khásra* measurements and maps at Lohla, and expressed himself well pleased with

their accuracy. I have every reason to believe, after having seen a large proportion of the cases, that the measurements and record of rights based on the khasra are most satisfactory." The work was carried out between 1856 and 1861, having been interrupted for eighteen months by the mutiny.

Another feature of this settlement was the provision of a record of rights for the *gúnth*, *sadábart* and *muáfi* villages, which had been left entirely alone in all previous settlements. Mr. Strachey in 1852 had made some measurement and settlement of the *sadábart* parganas, when under the orders of Government the control of their revenues was transferred from the temples to a Local Agency, but this was revised by Mr. Beckett and some villages remeasured. The temples and the proprietors of the *muáfi* lands agreed to pay for the survey and preparation of the record of rights of their assigned lands, it being represented to the former that a regular settlement would remove the opportunities for embezzling the revenue, which the temple agents had formerly made such good use of.

Settlement of *gúnth*, *sadábart* and *muáfi* villages.

Another reason for the regular assessment of the assigned and revenue-free villages was the imposition at this settlement of cesses, which had not hitherto been levied but were now imposed on all villages, revenue-paying and revenue-free alike.

Cesses first imposed.

The former settlements of Garhwál had been based chiefly on the previous demand; in this settlement that item was to a great extent eliminated. According to Sir Henry Ramsay, "in the highly cultivated and agriculturally prosperous parts of the country, the bearing of acreage on population and *vice versa* was the main item of calculation, and that in the less populous tracts or where agricultural assets were found to be subordinate to trading and other casual capabilities, the census ... afforded the main basis of the revenue assessment." This however merely concerned the distribution of the revenue. As regards the actual rates levied, they were based on the assumption "that terraced land generally with an average population was worth 0-11-6 *per bisí*." This rate applied to the total cultivation gave a sum the incidence of which on the total population was between seven and eight annas per head. Further land was classified at the survey into irrigated, first class dry, second class dry, periodically cultivated (terraced) land, and waste (terraced land). These were reduced to a common standard by doubling the irrigated area, taking one-third more than the area of first class dry land, and halving the area of periodical cultivation. Second class land was the standard and remained unaltered while waste was omitted altogether. For the whole district the assessable area reduced to a common standard worked out to much the same figures as the total area, and the ordinary village revenue appears to have been obtained by applying the average rate to this reduced area, and by applying a rate of eight annas to the population and taking a mean between the two sums thus arrived at. However the standard revenue was lowered for various causes, *e.g.* vicinity to heavy jungle, or high elevation. In order to ascertain local conditions of this nature, Mr. Beckett inspected every *patti* before assessing it. This inspection was not however of the field to field character now required, nor was it accompanied by the elaborate enquiries made by Mr. Batten. A whole *patti* was frequently inspected from a neighbouring hill, *e.g.*, Dhajjúli from the part of Dúdatoli above Pindwálni, and no settlement notes were recorded on each village. After this inspection "the villagers of one or two or more *pattis* according to size assembled at a convenient spot," where the revenue was discussed and settled, engagements taken, *thokdári* and *málgucári* dues arranged, mill rents assessed and miscellaneous rights, such as grazing in specified places, and taking the combs of wild bees, recorded.

The assessments.

The settlement was concluded in 1864. The demand was raised from Rs. 69,274 to Rs. 96,311 an enhancement of Rs. 27,037 or 39 per cent. This, considering that population had increased during the term of the previous settlement from 131,916 to 233,328, was certainly moderate. The *gúnth* revenue assessed at the same time amounted to Rs. 7,139, the *sadábart* to Rs. 3,626, and the *muáfi* to Rs. 263.

Working of Mr. Beckett's settlement.

Coercive process.

63. The ease with which Mr. Beckett's assessments have been collected is well exemplified by the following statement showing the processes issued for recovery of arrears of revenue :—

Year.	Writs of demand.		Process of arrest issued.			Movable property attached.		Remarks.
	Number of cases.	Arrears for which issued.	Number of cases.	Arrests made.	Arrears for which issued.	Number of cases.	Arrears for which issued.	
1861-62	...	...	...	...	...	...	...
1862-63	...	...	...	...	...	...	...
1863-64	...	...	...	...	...	...	...
1864-65	...	...	...	...	...	...	...
1865-66	...	...	...	...	...	...	...
1866-67	...	...	...	...	...	...	...
1867-68	...	...	...	...	...	...	...
1868-69	...	...	...	...	...	...	...
1869-70	...	...	...	...	...	...	...
1870-71	...	...	...	...	...	...	...
1871-72	...	...	...	...	...	...	...
1872-73	...	...	...	...	...	...	...
1873-74	27	452	...	...	...	...	...
1874-75	...	...	...	...	...	...	...
1875-76	...	...	...	...	...	...	...
1876-77	...	...	...	...	...	...	...
1877-78	...	...	...	...	...	...	...
1878-79	385	15,610	...	...	...	6	240	
1879-80	126	4,150	...	...	...	...	...
1880-81	156	3,078	...	...	...	...	...
1881-82	114	1,828	...	...	...	...	...
1882-83	76	1,721	...	...	...	...	...
1883-84	282	2,117	...	...	...	...	...
1884-85	281	8,581	...	...	...	...	...
1885-86	196	8,286	...	...	...	...	...
1886-87	273	6,469	...	...	...	...	...
1887-88	156	1,074	17	17	399	...	...
1888-89	97	881	27	27	422	...	...
1889-90	109	929	...	...	...	...	...
1890-91	1,226	23,365	97	1	1,361	...	...
1891-92	28	392	...	...	...	...	...
1892-93	654	14,555	314	66	7,850	...	...
1893-94	686	16,901	57	37	1,250	...	...
1894-95	540	19,182	10	7	297	...	...

No more severe process than the attachment of moveable property for arrears of revenue has ever been known, and that only occurred in the famine year of 1878. In other cases no severer process than arrest has had to be issued, and the money is invariably paid up at latest on arrival at the tahsil without any detention being found necessary.

Balances.

64. The following two statements, compiled from the annual revenue reports, show (A) the yearly demand and balance of revenue on the roll with the proportion of the latter to the former, and (B) the progress made in the liquidation of outstanding balances :—

A.—Yearly demand and balance.

Year.	Demand.	Balance of year's demand.	Nominal balance.	Percentage of real balance to demand.	Remarks.
1861-62	68,180	1,338	...	1.96	
1862-63	68,180	1,681	...	2.46	
1863-64	68,180	18	...	.02	
1864-65	68,180	...	...	...
1865-66	95,563	355	...	.37	
1866-67	95,563	370	...	.38	
1867-68	95,638	37	...	.03	
1868-69	95,633	910	...	.95	
1869-70	95,609	121	...	.12	
1870-71	95,584	102	...	.11	
1871-72	95,584	1,955	1,599	.37	
1872-73	95,579	1,264	...	1.32	
1873-74	95,579	468	...	.49	
1874-75	95,579	865	...	.91	
1875-76	95,559	245	...	.25	
1876-77	95,559	780	40	.77	

Year.	Demand.	Balance of year's demand.	Nominal balance.	Percentage of real balance to demand.	Remarks.
1877-78	96,186	5,610	...	5.83	
1878-79	96,186	6,255	...	6.40	
1879-80	96,176	2,091	56	2.11	
1880-81	96,140	1,618	9	1.67	
1881-82	96,122	851	48	.82	
1882-83	96,074	988	37	.99	
1883-84	96,050	979	...	1.02	
1884-85	96,050	218	...	.22	
1885-86	96,050	2,035	...	2.12	
1886-87	96,050	416	...	.43	
1887-88	96,050	115	4	.11	
1888-89	96,030	142	14	.13	
1889-90	96,016	15,009	21	15.61	
1890-91	96,640	4	4	...	
1891-92	96,632	33,379	...	34.54	
1892-93	96,630	29	...	.03	
1893-94	96,722	...	...	...
1894-95	1,06,353	6,442	16	6.04	

B.—Liquidation of outstanding balances.

Year.	Outstanding balance.	Removed from the account during the year.			Outstanding balance at close of year.	Remarks.
		Collected.	Remitted.	Total.		
1861-62	410	357	53	410	...	
1862-63	1,338	1,286	27	1,313	...	25
1863-64	1,681	1,656	25	1,681	...	
1864-65	18	18	...	18	...	
1865-66	...	...	...	...	...
1866-67	355	269	...	269	...	86
1867-68	86	86	...	86	...	
1868-69	37	37	...	37	...	
1869-70	42	...	...	...	...	42
1870-71	42	42	...	42	...	
1871-72	102	99	...	99	...	3
1872-73	1,058	1,781	77	1,858	...	100
1873-74	1,364	1,327	23	1,350	...	14
1874-75	482	482	...	482	...	
1875-76	845	720	125	845	...	
1876-77	245	228	17	245	...	
1877-78	780	740	40	780	...	
1878-79	5,610	5,452	...	5,452	...	158
1879-80	6,413	6,134	55	6,189	...	224
1880-81	2,315	1,944	56	2,000	...	315
1881-82	1,933	1,630	239	1,869	...	64
1882-83	915	731	111	842	...	73
1883-84	1,061	782	34	816	...	245
1884-85	1,224	1,152	...	1,152	...	72
1885-86	290	114	...	114	...	176
1886-87	2,211	1,673	302	1,975	...	236
1887-88	652	312	333	645	...	7
1888-89	122	96	15	111	...	11
1889-90	153	114	14	128	...	25
1890-91	15,034	15,013	21	15,034	...	
1891-92	4	...	4	4	...	
1892-93	33,379	33,379	...	33,379	...	
1893-94	29	29	...	29	...	
1894-95	...	...	...	...	...

The first considerable balance is that of the famine year 1878, and it was several years before a return to the normal condition of things was possible. In view of the absence of any processes during the earlier years the existence of outstanding balances during them must be regarded as the result of slack collection rather than inability to pay. For the last five years, in spite of almost continuous scarcity, outstanding balances at the end of the second year have been unknown. In fact, there are rarely any balances at all except in cases where, as in the scarcity years of 1890 and 1892, the collection is purposely postponed.

Modifications made of Mr. Beckett's settlement.

65. The modifications made in Mr. Beckett's settlement have been few and have resulted in a slight increase of revenue. They may be classified as follows:—

Particulars.	Khálsá.	Gúnth.	Sadábart.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Increase.</i>				
Assessment of lands granted in <i>nayá-bád</i> since last settlement	725 14 0	11 0 0	30 8 0	767 6 0
Assessment of lands converted from fee-simple to revenue-paying	15 0 0	...	...	15 0 0
Total increase	740 14 0	11 0 0	30 8 0	782 6 0
<i>Decrease.</i>				
Remission of assessment on land taken up for Lansdowne cantonment	13 8 0	...	...	13 8 0
Reductions on account of revenue-paying lands made fee-simple	65 0 0	...	...	65 0 0
Reduction of assessment on Bhotiyá villages on account of loss of livestock	24 15 11	25 12 9	...	50 12 8
Reductions on account of damages by slips, floods, etc.	226 8 0	...	7 8 0	234 0 0
Total decrease	329 15 11	25 12 9	7 8 0	363 4 8
Net increase	410 14 1	...	23 0 0	419 1 4
Net decrease ... ..	...	14 12 9	...	...

The assessments on *nayábad* lands were mostly made in the ten years subsequent to settlement. Small villages were thrown up at that time on account of objection to the supposed excessiveness of the assessment. Others had remained waste. Applications for these were made within a few years after settlement, and they were given out at first on a lease for five years and afterwards for the term of settlement. They were general throughout the district, the only *pargana* showing none being Chaundkot. The reductions of revenue in the Bhotiyá and other villages on account of deterioration have taken place for the most part during the last ten years, and seem to have been arranged on the principle that any village losing a small portion of its land by diluvion was *ipso facto* entitled to a remission of revenue on such portion, irrespective of the fact that new unassessed cultivation of ten times the extent might exist in the village. The exchanges between revenue and fee-simple land were made in connection with the Matkotákhál tea estate in patti Lohba in the earlier years of the settlement, and the Lansdowne cantonment was taken up in 1888.

Proprietary mutations.

66. The records bearing on the price obtained for land at various periods of the term of the expiring settlement are not very complete and of somewhat doubtful accuracy. For instance, in the return of proprietary mutations submitted in the annual revenue reports between 1861 and 1871, 54 cases of sales by order of court are stated to have occurred, involving a revenue of Rs. 3,572. The column for price is blank. This would give an average of land paying Rs. 70 to each case, the average for the rest of the term of settlement being Rs. 5. This is an impossible figure, and the entry must be a mistake for the price. The revenue of the land, however, remains unknown and hence no deductions can be drawn. Between 1861 and 1871, moreover, no proprietary muta-

tions by private transfer were registered at all. At that time the practice of making mutations through the patwari had not been introduced, and the people found the journey to Pauri too troublesome. This return from the annual revenue report, moreover, does not give the area. At a considerable expenditure of time, I had the three thousand or so files containing the particulars of these mutations examined and the area per acre recorded in each worked out, but the results exhibit the most extraordinary differences from the figures in the annual report: thus the total land revenue transferred in each case works out as follows:—

	By order of court.	By private transfer.	Total.
According to revenue reports	Rs. 2,055	Rs. 6,377	Rs. 8,432
According to the files	Rs. 746	Rs. 9,421	Rs. 10,167

Added to which, in the files in more than one-quarter of the cases, the price is not given. It is therefore hopeless to attempt to determine what are correct figures. Generally however in Garhwál, land paying one rupee of revenue may be taken as rather more than an acre of land (old measurement). The unit of land paying one rupee of revenue is better, because more constant, than the unit of an acre; for land in Garhwál is assessed as has been seen strictly according to its quality, the assessment being distributed over each field. The matter is, however, complicated in both cases by the fact that when a man sells his share he sells both measured and unmeasured land, and as the latter is also for the time being revenue-free, it is, though taken account of in the price, in no way entered in the statements. Excluding revenue-free land, transfer of which only took place in two years and then to a small extent, the figures in the annual revenue reports compare as follows since 1871:

Year.	Under order of court.				By private transfer.				Remarks.
	Number of cases.	Aggregate land revenue.	Price.	Number of years' purchase of the revenue.	Number of cases.	Aggregate land revenue.	Price.	Number of years' purchase of the revenue.	
1871-72	6	8	649	81	163	467	3,251	7	
1872-73	8	12	329	27	109	316	4,652	15	
1873-74	9	15	700	47	59	242	3,523	15	
1874-75	22	54	1,698	31	48	165	4,344	26	
1875-76	16	23	1,008	44	93	179	5,812	32	
Total	61	112	4,384	39	472	1,369	21,582	16	
1876-77	29	74	2,704	36	217	504	13,200	26	
1877-78	18	39	1,601	41	135	255	8,106	32	
1878-79	32	64	3,199	50	131	384	18,552	48	
1879-80	53	127	4,782	38	286	503	22,261	44	
1880-81	81	1,093	9,744	9	231	740	26,512	36	
Total	213	1,397	22,030	16	1,000	2,386	88,631	38	
1881-82	36	67	4,080	61	199	503	13,677	27	
1882-83	43	68	3,980	58	184	476	13,745	29	
1883-84	33	59	4,181	71	242	519	23,668	46	
1884-85	18	36	1,608	45	294	482	25,376	53	
1885-86	19	59	2,319	39	304	722	27,557	38	
Total	149	289	16,168	56	1,223	2,702	1,04,023	39	

Year.	Under order of Court.				By private transfer.				Remarks.
	Number of cases.	Aggregate land revenue.	Price.	Number of years' purchase of the revenue.	Number of cases.	Aggregate land revenue.	Price.	Number of years' purchase of the revenue.	
1886-87 ...	17	83	4,288	52	377	876	74,164	85	
1887-88 ...	14	29	1,660	57	620	994	68,735	69	
1888-89 ...	13	45	2,821	63	404	734	45,199	62	
1889-90 ...	4	64	6,303	98	291	343	20,297	59	
1890-91 ...	7	10	2,122	212	125	154	37,220	242	
Total	55	231	17,194	74	1,817	3,101	2,45,615	79	
1891-92 ...	9	9	322	36	646	878	61,709	70	
1892-93 ...	8	14	301	21	840	1,038	77,191	74	
1893-94 ...	2	3	200	66	266	366	12,890	36	
1894-95 ...	...	...	...	..	113	121	6,409	53	
Total	19	26	823	31	1,865	2,403	1,58,289	66	
Grand Total	497	2,055	60,599	30	6,377	11,961	6,18,140	52	

The average number of years' purchase of land sold by order of the court being only Rs. 30, while that of land transferred privately comes to Rs. 52, suggests that the well-known device of entering in the sale deed a higher price than is actually paid, to ward off pre-emption suits, has been powerfully at work in the case of private transfers. But the comparatively low figure for land sold under orders of the court is entirely due to very heavy sales during 1880-81, when the average number of years' purchase was only nine, less than half that of any other year. The total land revenue transferred was Rs. 1,093 as against Rs. 962 during all the other years. If the figures are correct, this can only be the result of extensive borrowings in the scarcity years of 1877-1878. If these extraordinary figures are omitted, the average for these cases will be seen to work out to nearly 53 years' purchase. Regarding the quinquennial periods, the differences between the two classes of cases in the first are no doubt due to the private transfers being chiefly of the poorer outlying land, while the sales by orders of the court were chiefly of the better and older village lands. In the fourth period there is a close agreement, while the figures of the fifth cannot be well compared, as mutations during this period were made only for a limited portion of the district, while new forms of mutation registers were being discussed. The apparent fall in prices is therefore not to be relied upon. The quinquennial periods previous to 1890 taken together show a steady rise in the price of land, and the large number of years' purchase given for land is a sufficient proof of the lightness of the revenue assessment. The figures, however, only commence from ten years after the last settlement, and perhaps hardly afford an adequate idea of the rise in the value of land since then. It was no uncommon thing with Mr. Beckett for the villagers in a body to refuse a village assessed at Rs. 5 or 6 because they thought the revenue too high; which, owing to the scarcity of land, certainly no sane people would do to-day. The striking increase in value of the outlying villages is exemplified by the fact that shortly after last settlement the village of Garbareet in Malla Dhángu, paying Rs. 12 revenue, was sold entire by the proprietors for Rs. 50. A few years ago they bought back half the village for Rs. 200.

No statement is given showing transfers from one caste to another, because in Garhwál, caste distinctions have little connection with professions. The dealings of professional baniyas either as shopkeepers or money-lenders are insignificant compared with those of either Chattrís or Bráhmans, while the greatest money-lender and produce merchant in the district belongs to the latter caste.

CHAPTER IV.

COMPARISON OF THE PRESENT AND FORMER CONDITION OF THE TRACT UNDER REPORT.

67. It is customary in this chapter to compare the extent of the former and present cultivated area, the area under the various classes of soil and sundry similar matters. In an ordinary plains settlement such statistics are available from the annual returns of cultivation before any settlement work is commenced. But in Garhwál, complete statistics of the present cultivated area were not available before settlement operations began; not, in fact till they were almost concluded. To discuss these statistics in the present chapter would be to anticipate the description of those operations. The discussion of the figures, moreover, involves a comparison of the former and present methods of survey, which would be premature before the method of survey adopted at the present settlement had been described. It has, therefore, been deemed advisable to postpone the consideration of the present and former area statistics till the next chapter. Thus much however may be stated here, that the former area of cultivation had largely increased at the time when the present settlement came to be made. The exact increase is even now unknown, and it is exceedingly improbable that it ever will be known, but there was every reason to believe that it amounted to at least fifty per cent. The irrigated area constitutes such an insignificant proportion of the whole (a little over two per cent.) that its increase is in general a matter of no importance except to the individual villages in which it exists. There was every reason to believe, however, owing to the activity in extending irrigation which had prevailed since the great famine of 1877 A. D., that the irrigated area had doubled since last settlement. This figure, like that for increase in total cultivation, is even now unverifiable. As regards the general character of the new cultivation, there was nothing to show that the general principle which governs such cases did not hold good here also, viz., that the best land in any country is, as a rule, first brought under cultivation, and, when that is insufficient, agriculture is extended to the worse. There were, however, some mitigating circumstances, such as the undoubted fact that inferior land is improved by continued tillage, as well as the increase in irrigation noted above.

Increase in cultivation.

68. The decreasing destructiveness of wild beasts may afford some indication of the progress made since last settlement. The following statement shows the number of human beings and cattle killed annually since 1877, earlier figures not being available:—

Wild animals.

Year.	Number of persons killed by—						Number of cattle killed by—						
	Elephants.	Tigers.	Leopards.	Bears.	Other beasts.	Total.	Elephants.	Tigers.	Leopards.	Bears.	Wild dogs.	Other beasts.	Total.
1877	...	4	2	6	...	12	...	319	3,379	183	...	561	4,442
1878	...	9	28	7	...	44	...	101	865	44	...	68	1,078
1879	Figures not available.						
1880	...	12	4	11	...	27	...	151	896	66	...	10	1,123
1881	...	25	1	2	...	28	...	62	1,039	117	...	...	1,218
1882	...	3	...	5	...	8	1	37	543	68	...	3	652
1883	...	2	1	3	2	8	1	66	516	101	...	22	736
1884	...	3	1	3	4	11	...	39	348	33	...	28	448
1885	...	12	5	3	1	21	...	133	334	65	...	8	540
1886	...	3	...	...	1	4	...	49	254	45	...	1	349
1887	...	1	...	1	...	2	...	45	405	16	...	...	466
1888	...	1	4	...	2	13	...	35	224	17	...	9	285
1889	...	5	3	2	3	13	...	17	178	8	...	11	214
1890	...	19	4	2	...	25	...	25	228	21	...	...	274
1891	...	1	5	...	5	13	...	7	121	7	...	1	136
1892	...	1	...	3	8	7	...	5	1,948	110	1	167	2,231
1893	...	3	2	6	2	13	...	210	1,247	29	...	17	1,503
1894	...	1	1	4	...	6	...	200	1,157	32	...	21	1,410
1895	...	2	5	5	5	17	...	326	1,072	95	...	...	1,493
Total	3	113	60	79	40	295	2	1,827	14,784	1,057	1	927	18,598
Average for 18 years.	16	6.27	3.33	4.39	2.22	16.39	11	101.5	821.33	58.72	0.5	51.5	103.32

For the 18 years for which the returns are given the destruction amounts to 163 persons and 10,586 head of cattle during the first nine and 132 persons and 8,012 head of cattle during the next. Mr. Beckett has given the figures for persons alone between 1850 and 1863. The total is 275 persons for these 14 years or an average of 19.6 a year. For the first period alone the average is 18.1, and for the second 14.7.

It will also be useful to compare the destruction of wild animals and the rewards paid.

Year.	Elephants.		Tigers.		Leopards.		Bears.		Wild dogs.		Hyenas.		Total.	
	Number killed.	Reward paid.	Number killed.	Reward paid.	Number killed.	Reward paid.	Number killed.	Reward paid.	Number killed.	Reward paid.	Number killed.	Reward paid.	Number killed.	Reward paid.
1877	9	76 0 0	77	340 0 0	167	435 0 0	...	...	...	...	253	851 0 0
1878	5	50 0 0	84	384 0 0	194	522 0 0	...	...	...	...	283	956 0 0
1879	4	...	74	...	205	...	...	...	...	...	283	*927 8 0
1880	9	83 0 0	80	367 0 0	149	402 0 0	...	...	...	...	238	852 0 0
1881	15	136 0 0	78	360 0 0	145	417 0 0	...	...	...	...	238	913 0 0
1882	7	260 0 0	84	372 0 0	178	499 8 0	...	...	...	...	269	1,131 8 0
1883	6	46 0 0	84	359 0 0	330	894 0 0	...	...	...	...	420	1,299 0 0
1884	9	90 0 0	98	403 8 0	158	450 8 0	...	...	2	4 0 0	267	948 0 0
1885	7	150 0 0	115	548 0 0	168	462 0 0	2	4 0 0	...	...	202	1,164 0 0
1886	4	33 0 0	108	495 0 0	173	463 8 0	...	...	...	...	285	991 8 0
1887	2	20 0 0	91	419 0 0	90	241 8 0	1	5 0 0	...	...	184	685 8 0
1888	17	137 0 0	135	597 8 0	217	560 8 0	1	5 0 0	...	...	370	1,290 0 0
1889	7	56 0 0	98	445 8 0	135	357 8 0	...	...	...	...	240	859 0 0
1890	5	50 0 0	63	279 0 0	96	260 0 0	...	...	...	...	164	569 0 0
1891	13	130 0 0	133	569 8 0	213	567 8 0	...	...	2	4 0 0	361	1,271 0 0
1892 ...	2	...	5	50 0 0	69	319 8 0	71	193 8 0	...	...	...	...	147	563 0 0
1893	2	20 0 0	65	291 8 0	90	249 0 0	...	...	...	...	157	†570 8 0
1894	77	338 8 0	117	311 8 0	1	1 0 0	...	...	195	651 0 0
1895	9	100 0 0	79	365 0 0	93	265 8 0	...	...	...	...	181	730 8 0
Total ...	2	...	135	1,487 0 0	1,692	7,243 8 0	2,939	7,552 0 0	5	15 0 0	4	8 0 0	4,827	17,243 0 0
Average for 19 years.	11	...	7.11	78.26 0 0	89.05	381.21 0 0	157.31	397.47 0 0	26	79 0 0	21	42 0 0	254.05	907.53 0 0

* Details not given.

† Includes Rs. 10, being the cost of arsenic purchased for killing wild animals.

Comparing these averages with those given by Mr. Beckett, it will be seen that here also, except in the case of tigers, where the increase is no doubt due to the reward for a Bhábar tiger being raised from Rs. 5 to Rs. 10, there has been a decrease in the number of animals killed, due no doubt to their increasing scarcity owing to the spread of cultivation.

Increase of population.

69. The cause of this increase in cultivation must be mainly attributed to the increase in population. That the increase of population was possible to the extent that actually occurred, must be attributed to some extent to improved communications. Subjoined is a statement showing the increase in population in each pargana since 1841 A. D.

Number.	Pargana.	Population at the census of--						
		1841.	1853.	1858.	1865.	1872.	1881.	1891.
1	Badhán ...	9,824	15,541	16,880	16,618	21,454	25,692	30,732
2	Bárahayán ...	22,063	33,497	34,232	37,463	44,727	54,089	63,229
3	Cháandpur ...	11,032	25,017	22,950	23,460	31,361	34,214	40,706
4	Chaudkot ...	7,130	13,648	13,543	17,646	22,060	23,403	26,573
5	Dasauli ...	3,261	7,106	7,063	7,117	12,523	10,043	13,775
6	Dewalgarh ...	9,474	20,498	17,645	18,629	25,036	24,693	29,895
7	Gangá Salán ...	16,538	28,078	30,265	32,955	40,877	42,318	47,510
8	Malla Salán ...	16,132	29,471	30,388	32,533	38,618	41,126	47,594
9	Nágpur ...	18,516	30,340	28,337	29,133	31,058	41,537	50,907
10	Painkhanda ...	4,603	6,358	5,959	5,592	6,383	8,276	5,804
11	Talla Salán ...	12,343	26,324	26,064	27,596	36,165	40,238	51,093
	Total ...	1,31,916	2,35,788	2,33,326	2,48,742	3,10,282	3,45,629	4,07,818

NOTE.—Pargana Talla Salán includes in 1881 and 1891. Figures for Ganges Division ... 1,137 3,550 Ditto Garhwál Division ... 243 1,884 and Ditto Lansdowne ... 1,354

The figures for each pargana must not be regarded too critically, as, owing to the annual journey to the Bhábar, the population of each part will be found to vary considerably according to the time of year at which the census is taken. The numbers shown in the Ganges and Garhwál Forest Divisions and even at Lansdowne are not to be deducted entire from the population of the district, as they are chiefly composed of Garhwáls, though, even if deducted entire, they would not considerably affect the broad facts. Without going into the details of the earlier enumerations, which are not improbably inaccurate, it will be seen that between 1858, when the last settlement was in progress, and 1891, when the present settlement was in a similar stage, population increased from 233,326 to 407,818, or nearly 75 per cent.

The number of people per square mile of total area, which works out to about 72, gives no idea of the density of the population, as a large portion of the district is uninhabitable. But the number to the square mile of cultivated area works out as under for the various parganas.

Number.	Name of pargana.	Assessable area in square miles.	Population at census of 1891.	Incidence of population per square mile of assessable area.	Remarks.
1	Báraheyún	79.39	56,465	711.33	
2	Chándpur	40.36	40,706	1,008.57	
3	Chaundkot	33.88	26,573	784.56	
4	Dewalgarh	32.39	36,659	1,131.80	
5	Gangá Salán	85.12	47,510	558.15	
6	Malla Salán	45.68	47,594	1,041.90	
7	Talla Salán	57.60	44,305	769.18	
8	Badhán (cadastrally surveyed)	12.78	16,152	1,263.85	
	Do. (unsurveyed)	7.83	14,580	1,862.07	
	Total, Badhán	20.61	30,732	1,491.12	
9	Nágpur (cadastrally surveyed)	18.59	23,001	1,237.28	
	Do. (unsurveyed)	17.03	28,830	1,693.88	
	Total, Nágpur	35.62	51,831	1,455.52	
10	Dasauli (unsurveyed)	9.04	13,775	1,523.78	
11	Painkhanda (unsurveyed)	4.52	4,880	1,079.65	
	Total of the district	444.21	4,01,030	902.79	
	Add for Lansdowne and Bhábar Forests ... ..	...	6,788		
			4,07,818		

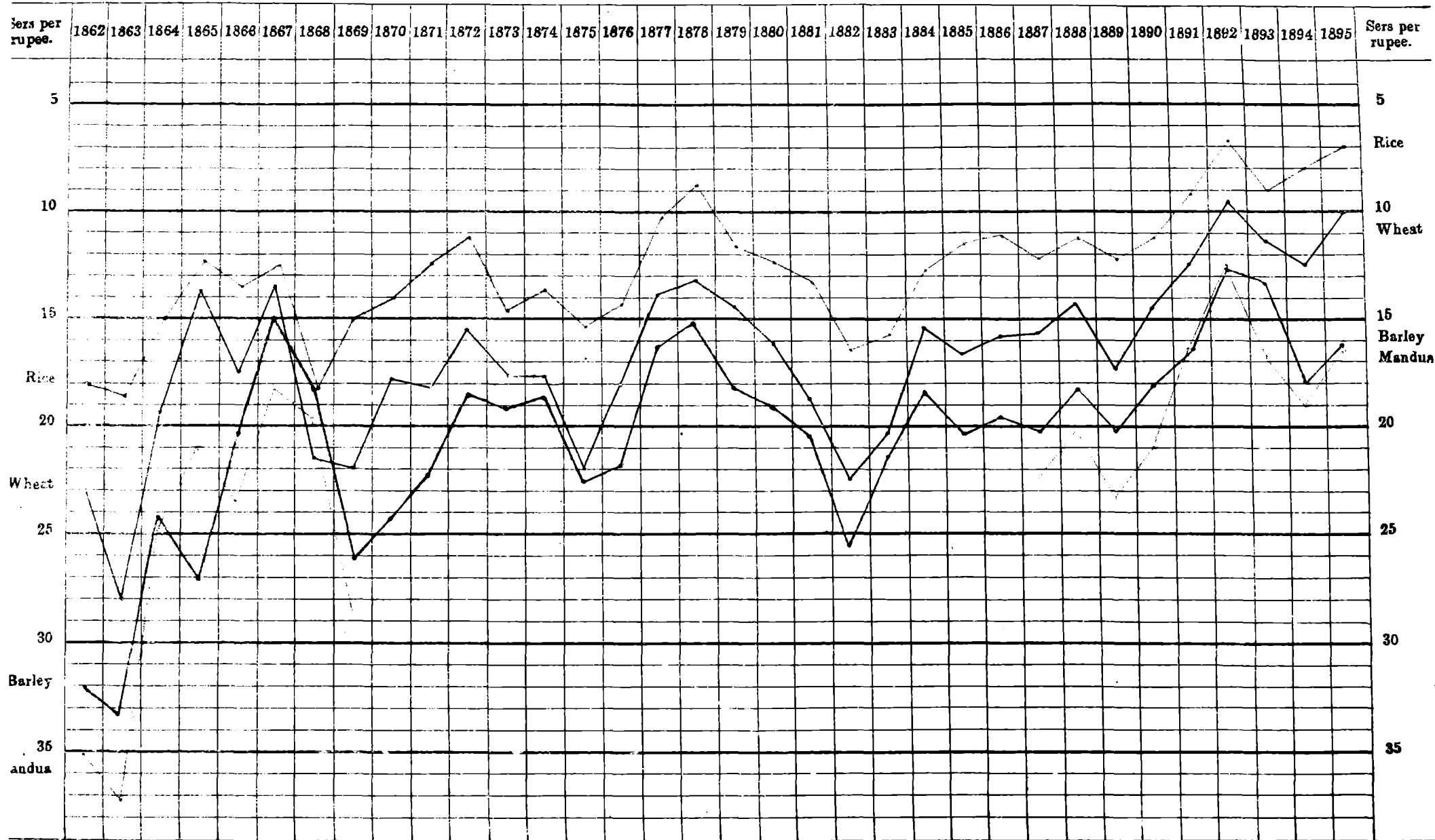
Rise in the price of produce.

70. The most noticeable effect of the expansion of population has been the rise in the price of produce. A chart is annexed showing the published selling rates of grain in Garhwál since 1862. According to these the price of grain has just doubled. Except, however, at the foot of the hills, or a short distance away, grain is nowhere obtainable at the prices mentioned. In the midland *bazárs*, Pauri, or Srinagar, or Lohba, the price of wheat flour has never during the last two years fallen below eight seers to the rupee and barley ten or twelve. In 1825 A.D., when the population was less than one-third of the present number, grain was exported to Rohilkhand from the southern parganas of Garhwál, and wheat was sold for twenty-five *seers* the rupee. In the midland parganas, whence, owing to the expense of carriage which has always characterized this district, agricultural produce could not be exported to the plains, and which were at that time too distant for the Bhotiyás, wheat used to sell at two maunds to the rupee, and purchasers ever at that rate were not forthcoming. But population has increased to such an extent that in a normal year the produce is only very slightly in excess of the wants of the cultivators, and should the harvest be at all short, they are reduced to purchasing grain from the plains. In the south-eastern parganas, which used to export grain to Rohilkhand, imports of grain may be said now to be almost the normal state of things. In Ganga Salán, however, grain is still exported to Dehra Dún in good years, and in Bárahsyún and Chaundkot under similar circumstances, sales are made in the local *bazárs* and to the villagers of Malla Salán and Chándpur. But almost all markets, in which the demand for grain is constant and considerable, depend for their regular supplies on imports from the plains, and in Pauri and Srinagar the amount of grain thus imported is enormous, though the latter place is still to some extent supplied with locally grown grain from Dewalgarh. In the case of grain from the plains, the same cause which formerly hindered export now checks import. During the scarcity which prevailed in Chándpur in the spring of 1895, the people of Sitonsyún and Banelsyún sold a quantity of grain to villagers who came thither seeking supplies, but during the rains of the same year they were buying gram from Pauri at the rate of six *seers* to the rupee, and were glad to obtain it even at that price. Owing to the inconstant supply of grain to the local *bazárs* from hill agriculturists, the price of grain in these places is now everywhere dependent on the price of grain in the plains, the cost of carriage being added. So that in general, the rise in prices has been a dubious benefit to the agricultural community of Garhwál. In a good year a few measures of grain are sold at a better price by those villages which are near a market, for in the others the expense of carriage offers the same obstacles to sale of grain as heretofore; in a bad year, on the other hand, whole parganas are obliged to purchase grain, either paying very high prices in the interior, or earning the cost of carriage by bringing it from the markets at the foot of the hills themselves.

Scarcity.

71. Garhwál may very roughly be divided into two parts, in one of which the harvest is liable to suffer from drought and in the other from excessive rainfall. The first comprises Bárahsyún, Chaundkot and the Saláns; the second the remaining parganas. Parts of both may be said to hold a middle position, and no part is entirely free from either calamity. In former times when excessive rainfall damaged the northern crops, the south getting a bumper harvest could supply grain to all comers. Similarly when an excessively dry season ruined the southern crops, the north, having received as much rain as was required, was brimming over with grain. In the famine of 1878, for instance, caused by almost a failure of the rains, Chándpur was the granary whence the people of the Saláns replenished their exhausted stocks. The contrary process taking place from Bárahsyún when the northern autumn harvest was injured by the excessive rainfall of 1894 has already been noticed. But in 1890, 1892 and again in the present year when deficient rainfall caused scarcity in the southern parganas, there was little or no grain to spare in the north, while it has been seen that in 1894 the Bárahsyún people were compelled to replace their sales to Chándpur by purchases at much higher prices. As long as in time of scarcity in one part grain could be obtained from the other, it was comparatively easy to meet any deficiency in the harvest. Villagers could buy from villagers and such transactions invariably take place at

CHART ILLUSTRATING THE PRICES OF FOOD GRAINS IN THE GARHWAL DISTRICT BETWEEN 1862 AND 1895, A.D.



lower prices than when villagers buy from *baniyas*. Credit could also be obtained on easy terms, and as both were subject by turns to the same calamity no great impoverishment of either resulted. But when all in turn have to deal with the large grain merchants at the markets at the foot of the hills, the case is different.

From the time of the British conquest in 1815 A.D. till the last settlement, scarcity seems to have been absolutely unknown in Garhwál. 'The "few inhabitants" left by the Gurkhas inhabited the fertile lands abandoned by their former owners, and, as has been seen in considering the question of tenures, the only limit to cultivation was the number of cultivators and their ability to clear the land of the forest and jungle growth which had sprung up during the interval since its abandonment. There was slight scarcity owing to drought during the years following the last settlement, 1865-67; but there was little distress and no deaths from starvation. Nor were any public measures needed to alleviate the condition of things which then prevailed. The first severe scarcity known in Garhwál was that of 1877-78. It appears to have been at first supposed that State aid would be unnecessary. Accordingly when finally the starving people were furnished with food, many died from the effects. This was especially the case at the poorhouse established at Bilkhet near Bánglát, the dead from which were consigned in large numbers to the Nayár river, which was conveniently situated for their disposal. No statistics are available as to the number of people relieved or the amount spent, but the scarcity is admittedly the severest which has ever visited Garhwál. The scarcity of 1877-78 was due to failure of the summer rains following previous bad harvests, and was practically confined to the southern parganas. In 1890 and 1892 the district was again visited with scarcity due to a failure of the winter rains. State relief on these occasions took the form of importations into the affected portions (chiefly the south of the district) of grain, which was either sold to the villagers for cash or advanced under the Agriculturists Loans Act, the price to be recovered in instalments. Those who had neither cash nor land were given grain free, but very few applied for this form of relief. The expenditure in 1890 aggregated nearly a lakh and a half of rupees and in 1892 over a lakh and a quarter. No trustworthy figures are forthcoming as to the population relieved. This form of relief, involving as it did purchase of grain in the cheapest market, carriage on the cheapest possible terms, and the management of affairs by Government officers free of cost, not only rendered famine impossible but prevented any serious rise in the price of grain in the district, while the underlying principle, that of a loan on easy terms, is one that has always been particularly grateful to the Garhwáli. The repetition of the operation in 1892 was hailed with delight. The repayment, however, of the combined loans was a matter which has severely taxed the resources of many villages. Were there a cart-road into the interior of Garhwál, the importation of cheap grain to meet any local demand is a matter which might be safely left to the competition of grain merchants. With the present prohibitive cost of carriage, however, these men dare not advance their supplies further than a march or two into the interior of the hills to such places as Dogaddá, Banjádei and Mohán. Were they to come further, the price to be profitable would be so high that villagers would prefer going to the lower marts and purchasing at lower rates.

In 1893 and 1894 the excessive summer rain damaged the crops of the northern parganas and resulted in some scarcity in the spring of 1894 and 1895 respectively. In the former year advances were made to the amount of nearly Rs. 1,500 in Dasauli, Badhán, Nágpur and Painkhandá, while in the latter year nearly Rs. 5,000 were advanced in Chándpur pargana.

72. Were statistics available for a longer period, or were those of the earlier years more reliable, it would be interesting to compare the birth and death rates with the increase in population and the rise in the price of grain. But as it is, the conclusions drawn must be restricted to the present state of the birth and death statistics and those of the last few years. In the last 15 years there has been a large increase in the death rate, from a little over 20 to over 30 in the thousand of the population. Concurrently with this there has been a decrease in the birth rate from about 40 to little over 30 in

Public health.

the thousand, so that while in 1882 the births exceeded the deaths by 5,943, in 1895 the excess amounted to only 523. Years of scarcity are chiefly signallized by severe outbreaks of cholera. In 1879, 3,473 deaths occurred, and in 1892, 5,943, the total number of deaths in this latter year being largely in excess of births. Population is now increasing very slowly. During the last five years it must have remained almost stationary. The following statement shows the principal statistics for the period of settlement, so far as they are available:—

Year.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	Injuries.	Other causes.	Total.	Death per one thousand of the population.	Total births.	Birth rate per 1,000 of the population.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Remarks.
1867 ...	351	47	1,722	...	...	2,018	4,138	16.63	...	...	...	...	Population, 2,48,742 according to the census of 1865.
1868 ...	20	6	1,659	...	...	2,915	4,602	18.50	...	...	...	...	Ditto.
1869 ...	...	2	1,992	1,237	...	1,282	4,513	18.14	...	...	...	...	Ditto.
1870 ...	6	1	2,134	...	...	2,679	4,820	19.37	...	...	...	...	Ditto.
1871 ...	...	6	2,551	2,076	278	503	5,414	21.76	...	...	...	...	Ditto.
1872 ...	...	74	2,356	2,576	287	563	5,856	18.80	...	...	...	...	Population, 3,10,282 according to the census of 1872.
1873 ...	27	28	2,865	2,207	341	733	6,201	19.98	...	...	...	...	Ditto.
1874 ...	...	31	3,060	2,027	363	580	6,070	19.56	...	...	...	...	Ditto.
1875 ...	587	16	2,700	2,376	262	639	6,649	21.42	...	...	...	...	Ditto.
1876 ...	...	...	3,246	2,509	257	560	6,572	21.18	...	...	...	...	Ditto.
1877 ...	...	...	2,719	2,042	248	753	5,762	18.57	...	...	...	...	Ditto.
1878 ...	17	18	3,214	3,143	296	408	7,001	22.85	...	...	...	...	Ditto.
1879 ...	3,473	6	2,743	1,711	225	342	8,500	27.39	6,041	19.47	...	7.92	Ditto.
1880 ...	...	...	3,035	2,384	247	344	6,010	22.27	6,589	21.23	...	1.04	Ditto.
1881 ...	659	2	3,474	2,706	244	350	7,625	21.77	8,521	24.65	2.88	...	Population, 3,45,620, according to the census of 1881.
1882 ...	...	2	4,046	3,331	238	294	7,911	22.89	13,854	40.08	17.19	...	Ditto.
1883 ...	...	9	3,683	3,824	243	370	8,129	23.52	12,793	37.01	13.49	...	Ditto.
1884 ...	...	11	3,722	3,118	210	165	7,226	20.90	13,782	39.87	18.97	...	Ditto.
1885 ...	33	5	4,100	3,611	219	186	8,154	23.59	11,852	34.20	10.70	...	Ditto.
1886 ...	...	1	3,835	2,991	232	136	7,195	20.81	12,462	36.05	15.24	...	Ditto.
1887 ...	567	2	4,759	3,925	200	219	9,672	27.98	13,858	40.09	12.11	...	Ditto.
1888 ...	3	17	4,779	3,982	227	203	9,211	26.64	14,008	40.53	13.89	...	Ditto.
1889 ...	109	1	4,656	3,610	229	175	8,780	25.40	12,353	35.74	10.34	...	Ditto.
1890 ...	620	1	6,123	3,276	224	175	10,419	30.14	13,815	39.97	9.83	...	Ditto.
1891 ...	66	13	6,977	3,232	236	189	10,713	26.26	11,666	28.61	2.35	...	Population, 4,07,818, according to the census 1891.
1892 ...	5,943	3	8,939	3,108	242	224	18,469	45.33	12,755	31.28	...	14.05	Ditto.
1893 ...	1,525	13	5,447	3,099	203	213	10,500	25.74	12,497	30.64	4.90	...	Ditto.
1894 ...	10	124	7,691	4,110	242	328	12,514	30.68	15,880	38.96	8.27	...	Ditto.
1895 ...	...	13	8,845	3,970	240	309	13,377	32.81	13,300	34.08	1.27	...	Ditto.

Outlets for the surplus population
(a) Forests

73. At the same time that the population has so largely increased, several new outlets for the surplus population have been opened up. In 1868 the Garhwal Forest Division was constituted and with the handing over of the forests to the Imperial Depart-

ment the annual expenditure on establishment and works became a permanent source of income to the people of Garhwál. In 1879 operations became so extensive that the Ganges Forest Division was constituted. The annual expenditure in these two divisions is now roughly a lakh and a quarter of rupees, of which it may be safely said that half a lakh is paid to Garhwális. This sum, however, by no means represents the whole benefit. Exporters employing men to cut timber and bamboos probably pay considerably more than this to Garhwális, and the wages paid average four annas a day. The largest portion of the earnings in the forests comes to Malla and Talla Salán, where the village in which a road contractor resides is usually conspicuous by the fine house he has built himself.

In 1887 a native infantry regiment to be recruited exclusively from Garhwális was established in a cantonment on the Kaludánda range above Kotdwára, since named Lansdowne. The payments to native officers and men now aggregate over a lakh of rupees yearly, and this amount steadily poured into the district year by year has very materially affected the wealth of the people. They themselves say that before the establishment of the Lansdowne cantonment money was very scarce in Garhwál, but since then, though grain may be scarce, money is always plentiful. Two more battalions have since been placed at Lansdowne, and although they do not, as a rule, recruit Garhwális, still they form in many ways a source of profit to the people. The Garhwál regiment at Lansdowne chiefly benefits the northern parganas, whence most of the recruits are drawn.

(b) Lansdowne cantonment.

Probably the most considerable cash income of the population is derived from service in the plains and hill stations. This is strikingly shown by the sum of the money-orders paid in the district in a year, which amounted during the twelve months ending June 30th, 1896, to over a lakh and a half of rupees, exclusive of money-orders paid at Lansdowne and Kotdwara. Garhwál exports hardly anything to the plains, practically nothing that is not paid for in cash. On the other hand, a large sum in money orders is sent by shop keepers throughout the district to dealers in the plains in payment of consignments of cloth, vessels, &c.; still these remittances are so much less than those sent into Garhwál, that the Post-office has to draw about Rs. 70,000 yearly from the treasury. And remittance by money-order is adopted by few except those in permanent service in the plains or elsewhere. Men temporarily employed as *jhampánis* or hot weather servants at hill stations usually bring back their earnings in person on their return home at the end of the season.

(c) Labour in the hill stations and plains.

In 1869 Colonel Garstin, the District Officer of Garhwál, began making canals and letting out land for cultivation in the Garhwál Bhábar, with the intention that it should "be, as it were, a depôt where in times of scarcity grain can be procured by the people of the district." Since then cultivation has expanded largely until there are at the present time 61 villages with 8 square miles of cultivation all owned by Government and under direct management, hence called the *Khám* Estate. So far, however, as there may have been any ulterior aim of furnishing employment to the people of Garhwál the scheme has only been a modified success, the Garhwális from the hills constituting 348 out of the total number of 582 tenants.

(d) The Bhábar estate

74. The most important improvement in the communications of Garhwál that has taken place since last settlement was the construction in 1884 of the Oudh and Rohilkhand Railway to Najibábád. No part of the system entered Garhwál, but communication with the outer world was thus brought almost to its very doors. An extension has been made during the present year into the district itself.

Communications improved. The Oudh and Rohilkhand Railway.

As regards roads, it is somewhat difficult to ascertain exactly what has been done. There are few roads now in existence which were not represented by some sort of track before last settlement, while, on the other hand, there are few roads which then existed which have not been since more or less realigned and altered, if not always improved. And though most exact statistics are forthcoming from the Public Works Department as to the roads now in existence, no information is available as when particular

Roads.

lines were entirely remodelled. A list, however, of the roads at present repaired by the Public Works Department may be given here :

Second class roads.

	Miles.	
Srinagar to Dogaddá	48	Remodelled since last settlement.
Pauri to Samai	48	Ditto ditto.
Lachmanjhála to Badrináth	170	Ditto ditto.
Rudraprayág to Kedarnáth	53	Ditto ditto.
Guptkási to Chamoli	27	Ditto ditto.
Karnprayág to Panuákhál	30	Mostly old road.
Nandprayág to Gwáldam	38	Mostly remodelled ; part new.
Total	414	

Third class roads.

Simli <i>viá</i> Tharáli to Kuwargár	48	Partly new ; partly remodelled.
Gwáldam to Rámni	38½	New.
Ghát to Tapoban	33½	Do.
Joshimath to Niti	41½	Remodelled.
Bánjbagar to Lohba	21½	Ditto.
Lohba to Bungidhár	12½	Old.
Bungidhár to Baijrau	14	New.
Kainyúr to Márchula bridge	39½	Old.
Dípakhál to Mandál river	15	Do.
Domaila <i>viá</i> Chaumásu to Fatehpur	42½	Mostly old ; part new.
Bubakhál to Sarainkhet	40½	Old.
Seriyá to Mandál river	22	Do.
Chándpurkhál to Chaumásu	55½	New, remodelled, and old, combined.
Ráyatpur to Dhauntiyál	10	Old.
Ayárdhar to Kaludánda... ..	4½	New.
Dwárikhál to Bidáeni	25½	Do.
Chaukigháta to Byásghát	39½	Do.
Byásghát to Chaumásu	14½	Do.
Adwáni to Byásghát	9	Do.
Pauri to Deoprayág	15	Do.
Mándakhál <i>viá</i> Mason to Jaripáni	16	Do.
Chatuapipal to Mándakhál	36	Do.
Kirsál to Dobri	5	Do.
Srinagar to Musagali... ..	14	Do.
Chatuapipal to Ukkimath	28½	Do.
Pokhri to Karnprayág	8	Do.
Chamoli to Pokhri	13	Do.
Diwálikhal to Kimoli	6	Do.
Total	670	

Provincial roads.

Fatchpur to Kotdwára	11	Old.
Kotdwára to Kauriya	4	In the Bhábar (cart-road) ; new.
Total	15	

GRAND TOTAL ... 1,099

There is a road seven miles in length between Kaludánda and Fatehpur under the Military Works Department. It was made of recent years to afford access to the new cantonment at Lansdowne.

The Forest Department also maintain a number of roads in the Bhábar and hills adjoining, for export purposes. The most important, which serve as continuations to the district roads, appear to have been in existence at last settlement.

No estimate can be hazarded of the cost of these roads. Until 1882 the roads were under the control of the District Officer. They were then handed over to the Public Works Department.

Benefits of improved communications.

75. It has been already stated that the increase in population was rendered possible largely owing to the improved communications. The existence of a railway at Najibábád has rendered a constant supply of grain available there at a price which is not subject

to violent fluctuations. The grain imported thence is now essential to the existence of the population of Garhwál. In the same way the improvement in the road to Srinagar has rendered it possible to import into the interior an amount of grain which, with the former narrow road, would have been quite impossible.

Another effect of the combined improvements in railway and road communication has been to enormously increase the number of pilgrims to the sacred shrines. No estimate of their numbers is given in the last settlement report, as it seems to have been supposed that the figures given by Mr. Traill would hold good for all time. Mr. Traill in 1820 estimated the number of pilgrims at from seven to ten thousand, "of which however the greater portion are Jogis and Bairagis; though in the year of the *Kumbh melá* at Hardwár the numbers were much larger. In 1820 the pilgrims who reached the temple amounted to 27,000, while many thousand turned back for fear of the cholera which then raged in Garhwál." At the present time in ordinary years the number of pilgrims may be taken as between forty and fifty thousand, while in a year of the great fair at Hardwár the number may reach one hundred thousand. At the rate at which grain sells on the pilgrim route (two or three seers to the rupee) it is hardly possible to make the pilgrimage at a less cost than Rs. 20, and though many are *faqirs* and beggars, many others employ coolies to carry their baggage and themselves; and the income to Garhwál from the pilgrims cannot amount to much less than five lakhs annually. Much of this is however spent in carriage of grain from the plains, the district not affording a sufficient supply.

Pilgrims.

76. As the pilgrims and grain importers use only a few out of the sum total of more than one thousand miles of road, it will be seen that the majority of existing roads are of no great use except in so far as they enable officers to get about the district more easily. Except in the far north, however, the village paths are, or can easily on occasion be made, practicable for ponies, while in the extreme north even the Government highways cannot be traversed by any but Bhotiyá animals. The chief difference between the roads and the village tracks throughout Garhwál is that the former usually take the shortest cut between distant points, while the latter are more circuitous, going from village to village. But when one's object is not to make journeys against time, but to investigate the condition of the district, the drawbacks of the latter route are trifling compared with its advantages. So that any extension of the existing system of bridle paths is to be deprecated. This is the more so as the cost of carriage even on the best of existing bridle paths is almost prohibitive. On the road from Kotdwára to Pauri, for instance, which is, as roads in Garhwál go, a remarkably good one, the cost of carriage is Rs. 2-8-0 a maund. That is to say, grain which is sold at Kotdwára at sixteen *seers* to the rupee can be sold at Pauri for just eight *seers*. In the case of more expensive grain the cost of carriage is of course relatively less. Thus grain at ten *seers* to the rupee at Kotdwára can be sold for something more than six *seers* at Pauri, and thus the difference in price between the coarser and finer grains is usually small. It is said that before the establishment of Lansdowne as a cantonment the rates of carriage were much lower, from Re. 1-2 to Rs. 1-4, and that the present rates are due to the increased demand. Were this the case the evil might be expected to cure itself by the action of competition. In the cold weather at present the Bhotiyás bring up grain on their sheep and goats at the latter rates, but the mule owners are nevertheless able to maintain their charges unaltered. It might have been expected that this high rate of carriage would induce villagers to earn some money in this way, but except at Lansdowne, where the rate is somewhat higher, being one rupee a maund for sixteen miles, the Garhwáli will hardly ever be found carrying up grain unless intended for his own consumption. Even at Lansdowne a large, if not the larger, portion of the regular carriers are Dotyáls from Nepál or natives of Tehri State. Indolence has been noted by successive officers as the ruling vice of the Garhwáli; an honest day's work for a good day's wage is something which does not appeal to him at all, and he much prefers mending roads at two annas a day, where he can loaf at leisure, to earning double the wages by carrying a load which cannot be shirked.

Limit to the usefulness of existing communications.

Cost of transport.

Effects of the increase of population.

77. It will be seen, then, that the increase of population has made the district a striking contrast to what it was even as recently as last settlement. However good the harvest may be, it is still insufficient for the growing numbers. It is as if the lean kine had eaten up the fat, and were nowise bettered by their meal. Elsewhere the value of the rupee and other causes may have resulted in a general rise in prices. In Garhwál, owing to its isolated position, the change has been one from plenty to famine. Mr. Richards, whose experience as a tea planter has been already alluded to, has told me that what could be purchased around Lohba for a *timási*, when he went there, now costs a rupee—five times the amount. The effect of this state of things has been more and more to drive the Garhwáli abroad, there to seek a better living than can be obtained from his ancestral lands. No doubt this has been facilitated by increased railway communication. Though the Garhwáli is by no means a stay-at-home, he looks to return some day to his native hills, and the fact that he can do so cheaply and speedily by railway, no doubt weighs with him when he embarks on service in other districts and distant provinces. The Burma Military Police includes a number of Garhwáls, others are employed in the Survey Department, while numbers have found a way into the police or regiments throughout Northern India. The number of men who go out thus is greatest in the most thickly populated parts, *e.g.*, Chaundkot and Talain in the south, and Talla Nágpur in the north.

Standard of comfort.

78. The result of increased commerce with the outer world has been to raise the standard of comfort. This effect seems fairly general throughout Garhwál, though more conspicuous in the most thickly populated parts, which have a larger leavening of men who have been outside the hills. The most striking example of this inability to put up with what satisfied the desires of their ancestors is found in the larger and more substantial houses which are now built, which have been mentioned as regarded by the older men as the result of a profitless craving for luxury. In many cases (as in Jakher in Taili Chándpur) it has been ascertained that the present generation have turned their father's houses into cowsheds, and built an entirely new village on a fresh site, and on a correspondingly larger scale. The old houses appear to have been usually thatched and not uncommonly one-storied. One-storied houses are now practically never built, except in situations where a two-storied house would be an evil omen (*bedh*) to some other dwelling. Even where new houses have not been built the roof has frequently been raised, the thatch replaced by slates and a verandah added. Except in the north, where the commerce with the outer world has been slighter, and in some of the warm valleys of the south, thatched roofs are seldom met with even on cowsheds. In the matter of food and clothing, there is less difference in the condition of the people, though in the south the rice and wheat are now consumed, instead of being sold as heretofore. The staple food remains, however, *mandwá*. Food is partaken of at least twice a day, and, when hard at work, three times. The man will have a meal of bread before going to the field in the morning; at midday he will have a meal of rice or porridge and the evening meal will consist of bread. This is customary at the ploughing seasons; in the middle of the cold weather the midday meal and in the hot weather the morning meal are frequently omitted. As regards clothing, the rule that the northern people wear woollen blanketing, the midland people hempen canvas, and the southern calico, still holds good. In the absence of any definite statements it is difficult to compare the condition of things in specified parts with that of former times. The use of calico is however extending, and is now general in Southern Nágpur. It is thus evident that the spread of population, causing as it does great scarcity of food, and which might reasonably have been expected to result in widespread misery and degradation, has had precisely the contrary effect, and the mass of the people live in greater comfort, not to say luxury, than at any previous time. On the other hand, there is beginning to exist here, as in most communities which have reached this stage of progress, a pauper population, who live by begging round the countryside. These at present consist almost entirely of residents of Choprákot and Dhajjúli (a district known as *Ráth*) who have been driven from their villages by scarcity and have been wandering about for the last three or four years.

CHAPTER V.

GENERAL ACCOUNT OF INSPECTION AND ASSESSMENT.

79. In 1887 the Director of Land Records and Agriculture was called on by the Board of Revenue for a report as to the resettlement of Garhwál and the methods by which it should be carried out. During 1888 certain test surveys were made by the Senior Assistant Commissioner of Garhwál, Mr. Campbell, at first in Lohba and afterwards in scattered villages throughout Garhwál, to ascertain the increase in cultivation since Mr. Beckett's settlement, the extent to which the old maps were correct, and the cost of measurement under the old system. From the first series of measurements it appeared that about 66 per cent. of the fields had been more or less altered since last settlement and that the new cultivation amounted to about 15 per cent. on the former area, of which about 10 per cent. was new cultivation apart from the old and 5 per cent. consisted of extensions made to old fields. The second series of measurements showed an increase of 33 per cent. on the whole. The cost of measurements worked out to 5 annas 11 pies an acre, or Rs. 243 a square mile. The Director of Land Records and Agriculture estimated that the increase in cultivation joined to the enormous rise in prices warranted an enhancement of Rs. 50,000, and recommended that on account of the very high cost of the old system of measurement and its inaccuracy, a scientific survey of the whole cultivated area should be undertaken. The cost of such a survey for 500 square miles was estimated by Col. Sandeman, Deputy Superintendent of the Survey of India, at Rs. 35,050, or including the cost of the traverse survey and half the share of the Deputy Superintendent's supervision, Rs. 60,000, or Rs. 120 a square mile. The cost of settlement was estimated at Rs. 23,000, including an allowance to the Senior Assistant Commissioner who was to be placed in charge of the settlement in addition to his ordinary duties, or a total of Rs. 83,000. These proposals were submitted to Government by the Board of Revenue in August 1889 and the revision of settlement of the Garhwál district on the lines laid down was finally sanctioned in Governor-General's Order No. $\frac{26-C}{104-R}$, of the 10th December 1889.

The tenth settlement.

80. Rules for the cadastral survey were drawn up by Col. Sandeman early in 1890, and after some slight modifications made in communication with the Senior Assistant Commissioner and the Commissioner were approved by Government in G. O. No. $\frac{1533}{I-556A}$, of 30th September 1890. Amendments were made by Government Order No. $\frac{885}{I-556}$, of 1st May 1891, which directed that dry soil should be classified as first or second class in stead of remaining unclassified as previously proposed, and Government Order No. $\frac{1540}{I-556A}$, of 1st June 1893, which abolished the *tehríj* or *jamabandi*, this record having been found useless. The basis of the cadastral survey was a series of stations fixed by observations made with the theodolite, aided by trigonometrical calculations, in or near every important piece of cultivation. The traverses for this purpose were run between stations of the Great Trigonometrical Survey. By this means the true relative position of a certain point in every important piece of cultivation was definitely fixed, however isolated it might be from the other fields of the village. The traverse survey went over the ground first, marking each traverse station on the ground by a triangle chiselled on rocks and covered with a pile of stones. The position of the traverse stations having been calculated and plotted on the scale adopted for the cadastral survey into sheets adapted to the size of each village, the sheets were given to the cadastral surveyors, who proceeded to fix thereby with the help of the planetable supplementary stations in each piece of cultivation, so situated as to admit of chaining up the intermediate spaces. The cultivation was then measured up by a system of chained triangles, inaccuracy in linear measurement over uneven ground being easily checked by the numerous fixed points already obtained by the theodolite and planetable.

The cadastral survey.

Instead of each terrace being separately measured, only each field, as defined by the Board, *viz.*, " a parcel of land lying in one spot, in the occupation of one cultivator, held under one title, and generally known by some name in the village," was shown on the map, though with a view to facilitate future partitions the approximate position of terrace walls within the field was shown by dotted lines. Pieces of waste lying within a field or between two fields were separately surveyed and numbered when more than eight links (5 feet 2½ inches) wide. When of less width than this, it became impossible to show their area on the scale of the maps, and such pieces were shown by a line, dotted when they lay within a field, and continuous when between two fields. In the former case an average width of five links was assumed for the piece of waste, and its length multiplied by this assumed width was deducted from the area of the field. In the latter case no deduction was made, the area of the piece of waste being divided between the two adjoining fields. The most common case of these narrow pieces of waste was of course terrace walls. The maps of the Garhwál Bhábar were plotted on a uniform scale of 16 inches to the mile. In the bills on account of the minute size of the fields, which averaged about ten to the acre, and in some cases gave as many as twenty or forty to the acre, a scale of 32 inches to the mile was necessary, which was amplified to 64 inches to the mile in the case of fields which were so small that the number could not be clearly shown against them on the ordinary scale. Fields of this description occurred in almost every village.

The Government order sanctioning the rules provided that the survey of *gánth sadábart* and *muáji* villages should be carried out along with that of revenue-paying villages at Government expense. In the case of fee-simple holdings no survey was to take place unless the proprietor desired it, and agreed to pay the costs, which were not to exceed four annas an acre.

An important part of the survey was the preparation, on a scale of four inches to the mile, of a map of each patti, reduced from the detailed village maps, showing each piece of cultivation. These maps are especially valuable in affording a comprehensive view of the cultivation of each village in relation to surrounding villages. The detail of streams, etc., occurring in waste land between villages, which had not come under the cadastral survey, was sketched in from the topographical maps. The nominal boundaries of villages in waste land were also approximately marked, but this part of the work had no great pretensions to exactitude.

The *khánápurí*.

81. The preparation of the *khasra*, or *khánápurí* as it is locally called, followed as closely as possible on the survey. Even when it became necessary to import a number of *amins* from the plains for the survey, hill *amins* were as far as possible used for this portion of the work. The numbers of the fields and their areas (deduction being made for interior terrace walls) after being extracted from the map in duplicate and passed by the surveyor were entered in the *khasra* in the office. The field work consisted of entering up the name of the proprietor, *kháekar* or *sirtán*, noting the name of the *tok*, and the old number of the field (if ascertainable, and in case a right to the fields was disputed) the names of the crops grown and the areas under them, the fact of the land being irrigated or *katál*, the rent paid, if any, the class of land, and rights in trees wherever they were found in measured land. All disputes were entered in a dispute list, the entry being meanwhile made in red, according to possession. On account of the large amount of unmeasured land which had been cultivated since last settlement it was found necessary to lay down definite rules regarding the tenure which should be allowed in such cases. The ruling principles have been examined in the second chapter of this report. As at the last settlement, slips were distributed at the time of *khánápurí* to all persons whose names figured in the records, and the filling up of these slips proceeded in the field along with the writing up of the *khasra*, each man being thereby informed of the numbers of the fields which were entered in his name in the records.

Most of the villages in the Bhábar belonging to the Government estate which is held in direct management and therefore exempted from settlement, the five settled

villages appear to have been overlooked, as no record-of-rights was prepared in their case by the Survey Department.

82. As soon as sanction was received, survey operations were started in the Garhwál-Bhábar, which was also used as a training ground for teaching survey to the patwáris and hill *amíns*. The survey of the Bhábar was completed by the end of February 1890, and the establishment was then transferred to the lower pattis of Talla and Gangá Salán. Owing to scarcity in these parts, however, it was found advisable to move up the survey parties into Bárahsyún towards the end of March, and to avoid any hardship to the people, arrangements were at the same time made for importing grain at Government expense and retailing it at a fixed price to the establishment. Meanwhile the people had begun observing the survey, and noted with much alarm the large increase which was beginning to appear in the area of their cultivation. They attributed this chiefly to the system of measuring field terraces, fields, and waste land all together. The chaining across waste ground was to them incomprehensible, except in so far as it portended the inclusion of the same in the assessable area. They complained to the Lieutenant-Governor who was at that time touring in Garhwál, and asked among other things that the length and breadth of each field should be entered in the papers so that they might assure themselves of the correctness of the measurement. And a petition was presented, signed by the most influential men in the district, praying that the survey might be first experimentally tried in a few pattis in which none of them held any land. The people of Bárahsyún with the idea of postponing the evil day, raised the cry of scarcity soon after the survey parties came among them, and continual reports were received that they not only refused to assist the surveyors but actually refused to allow work to proceed. Mr. Campbell, the Senior Assistant Commissioner, collected all the padháns of Gagwársyún, where the outcry had been particularly loud, and explained to them that it had been decided that the survey should proceed, and that any opposition would be severely punished, but at the same time that any reasonable objection would be listened to and met as far as possible. After this the villagers appear to have combined with the *amíns*, themselves mostly hill men, and the latter, on coming in to receive their pay on the 24th April, resigned in a body and declined to listen to the persuasions of their officers to go back to work. On the Senior Assistant Commissioner's return from Rámangar in May, endeavours were made to punish the ringleaders and reassure the villagers, but the establishment had by that time dispersed, and it was impossible to do much work during the remainder of the season. In the absence of any establishment to supervise, the Inspectors were used as surveyors, and about 1,300 acres were surveyed near Pauri, to show the people that the survey was possible and unobjectionable.

Commencement of operations.

83. Notwithstanding this breakdown of the work, it was decided that the survey should be pushed on as vigorously as possible next season, a staff of plainmen being entertained to replace the hill surveyors who had deserted. Sufficient men could not however be obtained, and on the 16th December 1890, Col. Sandeman submitted to the Board a revised estimate amounting to Rs. 1,48,530, the increased cost being due to the fields having been found just twice as numerous as had been expected, and to the extra cost of supervision due to the prolongation of operations, the result of the weak establishment. At the end of working season of 1891, it was found that the following amount of work had been completed at the cost noted :—

Revision of the survey estimates.

1,010 square miles of traverse survey at Rs. 41,293 :

191½ square miles including 887,181 fields of cadastral survey at Rs. 79,591.

This worked out at the rate of Rs. 39 a square mile for the traverse survey and Rs. 409 a square mile for the cadastral survey, and as it was deemed probable that the remainder of the district would necessitate 881 square miles of traversing and 854 square miles of cadastral survey, the total estimate was raised to Rs. 74,000 for the traverse survey and Rs. 4,27,000 for the cadastral survey, or Rs. 5,01,000 in all. The Government of India demurred to the expenditure of this large sum for an increase of

revenue which would not exceed Rs. 50,000. It was finally decided in Governor-General's Order No. $\frac{1051}{69}$, of the 30th May 1892 that the cadastral survey should be confined to the more accessible tracts, while a rough settlement should be made of the rest of the district. The areas defined as accessible were subsequently added to with a view to providing a full season's work for the survey party during 1893-94, and the parts finally surveyed were:—

Bárahsyún	...	...	...	...	Whole.
Chaundkot	...	...	...	...	Do.
Malla Salán	...	...	...	...	Do.
Talla Salán	...	...	...	...	Do.
Gangá Salán	...	...	...	...	Do.
Dewalgarh	...	...	...	...	Do.
Chándpur	...	...	...	...	Do.
Badhán	...	...	...	...	Pindarwár, Kapiri, Karákot and Khansar.
Nágpur	...	...	...	...	Talla and Bichla Nágpur.

Progress of the survey.

84. It has been already stated that in the season of 1889-90 the Bhabár was surveyed and operations were commenced in Bárahsyún pargana. During the season of 1890-91 the survey of Bárahsyún was completed along with one patti, Jaintolsyún, of Chaundkot, and four pattis, Kathulsyún, Chalansyún, Bidolsyún, and Ghurdorsyún, of Dewalgarh. The few hillmen who were employed during this season are said to have "worked unsatisfactorily as a body." After this season Col. Sandeman was transferred, and the survey remained in charge of Mr. Freeman, Extra Assistant Superintendent. During the recess of 1891 local *amíns* were trained to make up the full working number of men required. The number of plains *amíns*, however, diminished during the season of 1891-92, as many of them disliked the work in the hills and did not return after the rainy season. The annual note states that the "hill *amíns* are chiefly employed in writing up the *khánápurí*, but they are very unreliable and required careful watching." During this season the traversing was completed for the whole area which was eventually cadastrally surveyed, and the detailed survey was made of the rest of Chaundkot, and Malla and Talla Salán. During the season of 1892-93, the traversing having been completed, only a small party was employed in making supplementary traverses and revising some already made which had proved unsatisfactory. The cadastral survey extended to Gangá Salán, the remainder of Dewalgarh, pattis Ránigarh, Taili, Choprákot, Dhajjyúli and Chauthán of Chándpur, and patti Talla Nágpur. The maps of the Bhabár villages made three years before were revised and brought up to date. "In 13 villages, the changes, owing to extension of cultivation and alterations in field boundaries were so great that they had to be resurveyed in their entirety." This season the number of Hindustani surveyors again decreased, but this caused no inconvenience as "the majority of local *amíns* employed during the two previous seasons are now as efficient as most of the imported staff." The season of 1893-94 brought field work in Garhwál to a conclusion, the pattis of Síli, Sirgur and Lohba of Chándpur, Bichla Nágpur of Nágpur, and Kapiri, Karákot, Pindarwár and Khansar of Badhán being surveyed. A few supplementary traverses were also run to determine the correct relative position of scattered fields. It is noted that the fields in this portion of Garhwál averaged a somewhat larger size, and that the "locally trained *amíns* soon got through the work. Their outturn this season averaged that of the more experienced plainsmen, and the quality was as good. The Garhwáli, both in the field and office, has proved a decided success." The field work thus concluded in the spring of 1894; the office work has been recently finished—in September 1896.

The total area surveyed in the hills amounted to 979.9 square miles. From this 28.3 square miles was deducted for terrace walls within fields, the balance 951.6 square miles being shown in the khasras. The total number of fields aggregated 2,877,305 averaging .212 of an acre. Out of this, the assessable area amounted to 430 square miles, the remainder consisting mostly of large pieces of waste intervening amongst the cultivation.

85. Draft rules for the procedure to regulate the settlement were drawn up early in 1890 by the Senior Assistant Commissioner, Mr. Campbell, in communication with the Commissioner, Colonel Erskine, on the basis of the Gorakhpur and Basti settlement rules. The first two chapters, relating to preliminary procedure and the verification of the new records, were sanctioned with slight amendments by Government Order No. $\frac{741}{1-556A}$ of the 15th April 1891. Further slight alterations in the rules to harmonize with the emendations in the survey regulations were sanctioned by Government Order No. $\frac{1540}{1-556A}$, dated the 1st June 1893. The remaining chapters of the rules, excepting the third, which related to the assessment, also underwent no great alteration subsequently. The difficulty regarding the assessment rules arose from the fact that as three-quarters of the land was cultivated by peasant proprietors and almost all the remainder by tenants whose rent was a percentage fixed by the Settlement Officer on the land revenue, there were no rentals whatever on which an assessment could be based. The third chapter of Mr. Campbell's draft, relating to the procedure for assessment, provided for an assessment on an assumed rental, the revenue taken to be ordinarily fifty per cent. of this sum, but the Settlement Officer being permitted to take a higher or lower percentage if he thought fit. In September of the same year, revised rules for assessment were drawn up by Mr. Hooper, Secretary to the Board. These provided for an inspection of each village, and for the classification of villages into circles. The Settlement Officer was also limited to assessments varying from 45 to 55 per cent. of the assumed rental, though as in special cases a special rental might be framed for the village, independent of the circle rate, the Settlement Officer was not excessively tied down by this restriction. In November, however, Mr. Campbell was relieved by Mr. Partridge, and the latter officer was permitted, after having obtained some experience of the peculiar local conditions prevailing in the district, to frame rules for assessment himself, which were eventually drawn up in October 1891. In these, the hypothetical rentals were abandoned, and the principle involved was that the total enhancement having been determined at about fifty per cent. for the whole district the Settlement Officer, after inspecting each pargana, should frame proposals as to the amount of the total enhancement which might properly be assigned to it. On the approval of this sum by the Board, the Settlement Officer should proceed to distribute the sanctioned enhancement over the villages of the pargana, framing circle rates, and, so far as possible, assessing according to them, though for sufficient reasons he might take less or more than the revenue at standard rates. These rules, however, were rejected by the Government of India on the ground that they embodied "an empirical system offering no security for the future assessment of an adequate land revenue." It was also suggested that the statistics of cultivated area and crops, combined with an enquiry as to the average yield of each kind of produce grown, would furnish a basis for calculating the share of the produce which the assessment would realize, so that the next settlement might be framed with more accuracy than was now possible. Eventually rules were framed providing for the arrangement of villages in assessment circles, the formation of tentative revenue rates for each class of land in the pargana or patti, prepared on Mr. Beckett's plan of reducing all land to the common standard of second class dry, the ascertainment for each assessment circle of estimates of the average value of the produce of each class of soil and the correction and adjustment of the tentative revenue rates thereby, and for the formation of standard rates for each circle. The circle assessment register was modified to show the assumed value of the produce of each village and the proportion taken as revenue, and it was provided that in the case of assessments differing more than 10 per cent. from the standard rates, the special sanction of the Board must be obtained to the proposals. These rules were sanctioned in Governor-General's Order No. $\frac{1748}{240}$, dated the 20th July 1893.

Settlement rules and procedure.

86. Pandit Dharmanand was appointed Settlement Deputy Collector in the autumn of 1890, and was at first deputed to be in attendance with the survey camp for the purpose of deciding boundary disputes and demarcating disputed boundaries. In October 1891, the records from the Survey Department began to reach the Settlement

The attestation of the records.

ment office, and the Settlement Deputy Collector then commenced his attestation work or *muqábilá*, as it is locally known. The procedure adopted was to call the people of one or more patts together at some central place, in the same manner as Mr. Beckett had done. When these assembled on the appointed day, the villages were taken in order, and the *muntakhíb* read out. The slips distributed at the time of *ichánápurí* enabled the people to check the entries in this record. Alterations agreed to were made in the record, as well as those resulting from the decision of disputes. As far as possible all disputes were decided at this time. When the *muntakhíb* had been verified and revised, the resulting changes were made in the *khwat* or *phánt*, and this was similarly attested. At the same time there was prepared for each village a memorandum of village customs. For the most important of these matters, pre-emption, reclamation of waste and appointment of *padhás*, a printed note of the custom as approved by the Board was inserted for the whole district. Other points were noted according to local custom. When one village had been dealt with in this manner another was taken, and so on, till the whole of the patti or patts had been gone through, when the Settlement Deputy Collector moved his camp to the next place. The attestation work of the various parganas was completed as follows:—

Bárahsyún	...	..	..	...	...	15th September 1892.
Chaundkot	...	...	...	...	...	21st April 1893.
Malla Salán	...	...	...	...	...	15th July 1893.
Talla Salán	...	...	...	...	...	26th November 1893.
Ganga Salán	...	...	...	...	...	12th March 1894.
Dewalgarh	...	...	...	...	...	11th July 1894.
Chándpur	...	...	...	...	...	20th November 1894.
Badhán	...	...	...	...	...	30th November 1894.
Nágpur	...	...	...	...	...	31st December 1894.

The number of boundary disputes was so large, that in February 1892 Pandit Mánik Lál, the Deputy Collector stationed at Lansdowne in charge of the southern sub-division, was invested with the powers of an Assistant Settlement Officer for the purpose of deciding disputed boundaries, with the intention of relieving the Settlement Deputy Collector of the greater part of this work and also that there might be some officer empowered to settle such disputes near the Survey Camp, when the Settlement Deputy Collector was doing attestation work in distant parganas. The settlement of these boundary disputes was one of the least satisfactory parts of the settlement. Many were decided simply on the report of an *amín* or *munsarim*, without any attempt to visit the locality, and in other cases such inspection as took place was made from a distance of several miles. In August 1893, Pandit Mánik Lál was transferred to the northern sub-division, in which the surveyors were then working, and took up and decided the majority of the boundary disputes which arose in this part, the rest being decided by Pandit Dharmanand.

The fairing out of the records.

87. The fairing out of the new records proved to be a work of considerable magnitude. This much was in fact to be expected from the twenty-eight lakhs of fields. A necessary preliminary was found to be the erection of a large building to accommodate the writers at a cost of Rs. 9,400. The copying commenced here on the 1st March 1892, between fifty and a hundred men being usually employed in the work, and the records of Bárahsyún pargana were completed in February 1893. Chaundkot pargana was then taken up and practically completed by the end of the year. The records of Malla Salán were not complete till the end of September 1894. After this the work was pushed vigorously forward, Talla and Ganga Salán being completed by the end of February 1895, and during the year from March 1895 to February 1896, not only were the records of the remaining parganas Dewalgarh, Chándpur, Nágpur and Badhán faired out, but copies of the records of all parganas were made for the *patwáris*. The staff had naturally to be largely increased for this quantity of work, and at one time amounted to over five hundred men, but as the cost of supervision remained the same substantial economy was obtained. The only record now remaining to be completed is the copy of the mutation register for the *patwáris*,* the form of which was only

* Since completed—in October 1896.

prescribed in February 1896, and the delay in completing which was due to the non-receipt, until July, of forms from the Government Press.

88. The inspection of a hill tract for purposes of assessment is from one point of view an easier matter than the inspection of a tract in the plains; from another, it is considerably more arduous. Perhaps it would be more accurate to state that there are two ways of making an inspection in the hills. One is, like Mr. Beckett, to climb some commanding eminence whence all the villages in a glen can be seen, and the general extent of their cultivation, the steepness of the hillsides, the style of terracing, the surrounding forest, the available grazing land, and, with a good field glass, the character of the dwellings can be gauged with tolerable accuracy. No such method as this is practicable in the plains. To see a village there one must enter it; as far as the view of the surrounding country is concerned, one is more shut in on the open level expanse than in the narrow valleys of the mountains. Another plan of inspection is to pursue the plains method of traversing the cultivation of every village so as to view from close at hand the cultivated land of every part and to observe with the naked eye the style of houses and character of people. There is much to be said for both ways. The first will not enable the inspecting officer to judge of the correctness or otherwise of the soil classification of any but a very small proportion of fields; it is impossible to tell by looking at a soil from a distance whether the clayey or sandy element predominates. This is only, in fact, to be ascertained by handling. Nor is it possible by the distant inspection to judge of the character of crops. No portable field glass will reveal the quality of a harvest even half a mile off. Nor is the inner life of the village revealed to the far off observer as it is to the man who penetrates its very midst. On the other hand, the nearer inspection necessitating the ascent and descent of every hillside is a most arduous undertaking; and once in the middle of a village it is impossible to inspect outlying pieces of cultivation on the same hillside without actually visiting each of them, which is necessarily, from the uneven nature of the ground, a work of time. And though the traversing of the main piece of cultivation will usually indicate the nature of the underlying rock stratum and thereby the character of the soil on the rest of the hillside, it will not show the amount of attention lavished on the land by the villagers and character of the crops grown. The first method is superficial but comprehensive, the second though going to the root of the matter, is apt, unless excessively prolonged, to be incomplete. By the first method, accompanied by statistics, it is possible to assess a fair revenue as was done by Mr. Beckett, provided the villages are not of large size, a very unusual occurrence in the hills; but as it does not reveal the character of soils, it is absolutely useless for determining the application of circle rates to classified soils. In either case, it is of course assumed that the inspection is made with the village map in hand, and that the fields are compared with it, and the soil classification as far as possible checked.

Inspection methods.

89. Mr. Partridge commenced the inspection of Bárahsyún pargana towards the end of December 1892, and finished it by the end of May 1893. He notes: "It will be understood that I did not devote my whole time during these five months to this inspection work, as I am the district officer in addition to being settlement officer and have to divide my time accordingly." The inspection of Chaundkot was taken up after the rains in the same year, and completed by the end of January 1894. Malla Salán was the third pargana to come under assessment. Mr. Partridge in February and March 1894 inspected the pattis of Bangársyún, Dhaundyálsyún, Meldhár, Sábli, Khátli, Saindhár and Gujru, leaving three, Talain, Kolágúr and Iriyákot. He states: "I could easily have finished the inspection of the whole pargana myself in April 1894, but the Commissioner (Colonel Erskine) did not at all like my being so far away from the Alaknanda valley (in which preparations in connection with the Gauna flood were in full progress) and only agreed to my going to Malla Salán in February for inspection work when I pressed him on the subject, and on the understanding that I was back in or near Pauri by the end of March 1894. I had therefore to return there by that date." In July 1894 Mr. Partridge went on privilege leave, and though he returned for a month in October, the remaining inspections were made by me.

Mr. Partridge's inspection.

My inspections.

90. My inspection work began with the three remaining patts of Malla Salán, Talain, Koligár and Iriyákot, which were finished off in about three weeks at the end of September and beginning of October 1894. The method of inspection adopted was the second one of those already noted in almost every case. That is to say, with a few small exceptions, the cultivation of each village was traversed in order to ascertain the character of the soil in each, though no attempt was made to go into, or even view, every outlying piece of cultivation. At that time my experience of hill inspections was exceedingly limited, and I doubted whether more than this was possible, without a very large expenditure of time. Moreover, as the circle of the village had to be determined with reference to the bulk of the cultivation, this procedure caused no substantial inaccuracy. At the time of inspection, enquiries were made regarding the sources whence the people derived the Government revenue, the climate, character of the soil, and such matters; the replies to which were more valuable for their negations than their admissions; while more reliable information was obtained from a careful observation of the crops grown, the character of the harvest (the months of September and October are the very best for this purpose in the hills), the appearance of the inhabitants and the houses they lived in, and from testing the soil classification by a comparison of the village map with the fields passed through.

During October 1894 it was decided that every effort was to be made to finish the settlement of the whole district within one year, even if the character of the inspection had to suffer in consequence, and when I resumed work in the beginning of November it was with these instructions. The Commissioner, in a letter to the Board dated 1st October 1894, laid down a programme of the time which should be taken to complete the inspection of the district. The times for the cadastrally surveyed portion of the district, which alone need be considered at present, were as follows:—

	Days.
Talla Salán	42
Gangá Salán	35
Dewalgarh	30
Chándpur	33
Badhán	15
Nágpur	16
	—
Total	171
	—

This was based on the assumption that sixteen villages could be inspected in a day. But, as has been stated, there are more ways than one of making what may by courtesy be called an "inspection" in the hills, and the first, which was no doubt intended, is almost useless for enabling one to frame assessment circles. By dint, however, of extending the daily time spent in inspections from sunrise to sunset, and sometimes later, and doing office work at night, it was possible to make a modified inspection on the second system referred to, which was however sufficiently thorough to enable a fairly correct classification of villages to be made. It was not possible to traverse every village, but every hillside could be traversed and the character of the soil thus discovered, and at the same time those villages which were not actually entered (by far the minority in numbers and almost all of very small size) were inspected either from the edge of their lands or from a short distance off, whence a very good idea of the character of cultivation could be formed. Every day's programme, however, had to be carefully mapped out beforehand, so as to economise time; and when laid down, each day's inspection was a race to get through the programme before nightfall. During the short days of November, December and January, I had frequently to be escorted back to camp by torchlight. Talla Salán was inspected in this manner between the 1st of November and the 7th December, Ganga Salán between the 7th December and the 11th January. After a few days given to district work at Pauri and Srinagar, the inspection of Dewalgarh was commenced on the 18th January. Wet days, which were particularly numerous in the cold weather of 1894-95, though they delayed inspection (it is not possible to hold open a village map in pouring rain, and without it it is not possible to judge of the extent of each village, not to mention the accuracy of the soil

classification) were utilized in working off arrears of office work and writing out assessment statements, which aggregated over 1,200 for Talla and Ganga Salán; and later on in writing assessment reports, which, like other matters, had to be attended to in any spare moments that could be snatched from the actual business of inspection. Dewalgarh, Chánpur and Badhán were taken up more or less together and were completed by the 20th April. The remainder of the cadastrally surveyed area, a portion of Nágpur, was postponed till October, the non-cadastrally surveyed pattis being, for climatic considerations, taken up in the meantime. The Nágpur inspection, which lasted from the 1st to the 20th October, was rather more complete than that of the other parts. As it was the last portion of the hill tract to be inspected, and work was fairly up to time, it was not hurried in the same way as the earlier parganas. It was also discovered that probably the best method of inspection for the hills was a combination of the two systems already indicated, that is to say, each village was inspected twice, once while passing through it, and once while passing through the villages on the opposite side of the hill. This involved writing up notes on two villages at once, but otherwise it proved most successful. The visit to the village gave the thorough insight into the character of soil and cultivation and condition of the inhabitants that was necessary for a rigid circle classification, while the comprehensiveness of the general view brought out those accidental qualities which might make it seem desirable to depart from the revenue at standard rates in each case. It also frequently revealed the part of the village to which attention at the detailed inspection might with most advantage be devoted, on account of the doubtful accuracy of the soil classification. It is of course not pretended that the inspection was ideal, or anything resembling that. For a rapid inspection it was however fairly thorough, comprising about 500 acres of cultivation scattered over about ten times the area of waste daily. In Ganga Salán, however, the inspection had to be made at more than double this pace, and anything of the kind would have been quite impossible.

The Nágpur inspection completed that of the hill villages, leaving only five settled villages in the Garhwál Bhábar, the most considerable of which was a revenue-free grant. The inspection of these was made in November and the soil classification of each was revised in detail.

91. The principle of assessing by circle rates was a new departure in the history of settlements in Garhwál. Mr. Batten in a passage already quoted appears to have gone almost so far as to declare assessment circles impossible, while Mr. Beckett, though he had what may be called one circle rate for the whole district, made so little endeavour to rigidly adhere to it that its application unaltered to a village was quite exceptional. Sir H. Ramsay, in a famous passage in his Kumaun Settlement Report, has enlarged on the impossibility of pargana rates. "Take a line from the top of Chíná at Naini Tal to Ránibágh, both places and the country between being in pargana Chakháta, Chíná is too high for growing anything but barley or potatoes; the Baliya valley above Ránibágh is very hot and unhealthy; and the country between these two places has neither of these disadvantages. No one rate could be made applicable to the three localities nor could villages about the same altitude be classified. Two villages about the same height, but on different sides of the hill, may have nothing in common." The present assessment rules, keeping in view the casual character of hill villages noticed by Mr. Batten, fixed a variety of matters with reference to which assessment circles should be framed, noting that it was not necessary "that the *maháls* in each group must be precisely similar in every respect," only that they should be on the whole of about the same productive power.

Assessment circles.

Mr. Partridge instituted a very minute system of assessment circles. In Bárah-syán, for instance, taking as his starting point the mean type of village in the pargana, i.e., that village in which the revenue rate on the second class land was to be equal to the mean incidence of revenue on the second class land of the whole pargana, he formed nineteen circles in an ascending scale of quality, and seventeen in a descending scale. The following is a list of the circles. For want of more tangible matter, it is necessary

to describe each circle by the assessment rate applied to second class dry land in each.

Number of circle.	Rate per <i>bisi</i> of second class dry.			Number of <i>moháls</i> in each.
	Rs.	a.	p.	
I	6
II	1
III	7
IV	11
V	8
VI	7
VII	19
VIII	8
IX	3
X	27
XI	35
XII	3
XIII	18
XIV	6
XV	40
XVI	23
XVII	44
XVIII	14
XIX	53
XX	34
XXI	34
XXII	28
XXIII	76
XXIV	34
XXV	50
XXVI	26
XXVII	51
XXVIII	14
XXIX	27
XXX	15
XXXI	25
XXXII	7
XXXIII	13
XXXIV	3
XXXV	16
XXXVI	3
XXXVII	7
Total				796

The rate for second class dry in most circles, it will be seen, differs by one pice from the rate in the circles immediately above and below it. Mr. Partridge has thus described his method of distributing the villages into circles "I began with Ráwatsyún ... After inspecting all the villages in Ráwatsyún ... placing those which I considered average villages, looking at Bárahsyún pargana as a whole, in the circle paying the rates quoted in para. 21 above" [*i. e.*, the rate above noted with corresponding rates for other soils] "better or inferior villages in other circles paying rates proportionately higher or lower than such rates, according to the degree

in which they were better than or fell short of the average villages ... I then went on to the next patti and classified its villages in circles in the same way. I then compared the classification of certain villages in the two pattis. For instance, say that I found that in Ráwatsyún I had three villages in the circle, for which the accepted revenue rates were ... *per bisí* second class dry—8 annas ... and that in patti Bangarhsyún on the other side of the ridge below which lay the first three villages, I had four villages placed in the same circle. I then proceeded to enquire whether these last four villages were in point of fact equal to the first three, or better, or worse. If the villagers round questioned (who, it may be remarked, knew nothing of conclusions I had come to in Ráwatsyún) agreed that they were in fact equal, I considered that my classification was, so far as these seven villages were concerned, correct. If there was a general consensus of opinion that there was some slight difference one way or the other, and my classification seemed to require a little alteration, it was made. In this way, though I did one patti at a time, yet the patti was not treated as an isolated unit, but the results were compared with those for adjoining pattis which I had finished, and any necessary adjustment made, so that I have had the same standard before me throughout the pargana."

In Chaundkot, circles were framed in the same way, with the difference that villages were classified with reference to similar ones in Bárahsyún, and not with regard to the mean pargana village. Mr. Partridge has noted: "After having examined and assessed some 800 villages in Bárahsyún, I know of course when I see a village what class I should put it in if I used the standard I had used in Bárahsyún. I know what sort of village I should put into the class paying four annas a bisí of second class dry (and on other classes of land in proportion) what village I should put into the five annas class, what into the 6, 7, 8 and 9 annas classes, and so on." The following is a list of the Chaundkot circles:—

Number of circles.	Rate <i>per bisí</i> of second class dry.			Number of <i>maháls</i> in each.
	Rs.	a.	p.	
I	2
II	4
III	1
IV	2
V	1
VI	9
VII	18
VIII	38
IX	10
X	30
XI	37
XII	21
XIII	21
XIV	33
XV	17
XVI	29
XVII	9
XVIII	10
XIX	4
XX	11
XXI	4
XXII	4
XXIII	1
XXIV	5
XXV	1
Total	322

In the case of Malla Salán, the number of circles was under the Board's orders reduced, and they were made to proceed by annas instead of by pice, but they retained their abstract character. That is to say, the classification was not made by local position or contiguity, but by the Settlement Officer's opinion as to the "productive power" of

each village, and the "general consensus of opinion" of "the villagers round." A list of circles with the number of villages in each is as follows, for those patti of Malla Salán inspected by Mr. Partridge :—

Number of circle.				Rate per <i>bist</i> of	Number of <i>mahdls</i>
				second class dry.	in each.
				Annas.	
I	...	...	...	13	1
II	...	...	...	12	5
III	...	...	...	11	7
IV	...	...	...	10	35
V	...	...	...	9	33
VI	...	...	...	8	87
VII	...	...	...	7	104
VIII	...	...	...	6	55
IX	...	...	...	5	14
X	...	...	...	4	2
				Total	343

On the map of circles accompanying this report it has been found quite impossible to depict the numerous circles of Báráhsyún and Chaundkot, or even of Malla Salán. The colouring has been made to shew only those circles prevailing also in the west of the district, *viz.*, those in which 12 annas, 10,9,8,7,6 and 5 are the ruling rates. Other circles are coloured according to the ones among these to which they most nearly approximate in value.

My assessment circles.

92. My experience of assessment circles began with the remaining patti of Malla Salán, Taláin, Kolágár and Iriyákot. While admiring from afar off Mr. Partridge's minute system of classification, I had to confess my inability to imitate it. In Taláin the inspection was made in company with a couple of *thokdars* of the patti, who pointed out the villages which had a reputation for being particularly good, and those which had a reputation for being particularly bad, which might otherwise have escaped a beginner's attention. Regarding other villages, these gentlemen were diffident about giving an opinion on the ground that their exalted position exposed them in a peculiar degree to the malice of their neighbours. The *padhán* of each village however was not so scrupulous, nor were the *cosharers*. These were invariably of opinion that their village was the worst in the patti, and pointed for confirmation to some exceedingly poor land, some extent of which is to be found in every village, however good on the whole. The rates applied by Mr. Beckett to various villages also furnished some clue to the opinion he must have held of their relative goodness or badness, notwithstanding that he left no assessment notes. I recognized the superiority of the villages in what is known as the *taláin* or level area, with their rich level fields of clay soil, and also with the help of Mr. Beckett's rates, some other good villages here and there throughout the patti, and a more considerable proportion of inferior ones. I recollect, however, a distinct sense of disappointment when one day after making a very careful and close inspection of the villages of western Taláin, I was unable to find a pin's head of difference in quality between four-fifths of the villages visited; as, in view of the enormous differences which my predecessor had found to exist between villages in the same pargana, this seemed to me a sort of colour-blindness on my part. There was everywhere the same light mica-schist soil; everywhere the same range of good fields near the village where the natural poverty of the soil had been enriched by careful and continued tith; everywhere the same poor outlying fields; everywhere the same character of house and inhabitant. Added to which the only village about which there was what might be called a general consensus of opinion that it was worse than the rest—the *gunth* village of Páli—had been assessed by Mr. Beckett at by far the highest rate. At that time I firmly believed (as anyone must who has been accustomed to casually regard hill villages from a distance) in the inherent diversity of all villages in a patti. My circles therefore comprised no attempt at topographical continuity. Owing to lack of discernment,

I was unable to appreciate minute differences between villages, and accordingly contented myself with forming three circles, one for the average or most frequently occurring village, which was also, naturally, of medium quality; one for villages which for some reason or another seemed superior to the general mass; and a third for those which I imagined inferior, also on some specific ground. I declined even at that time to place a village in one or other of the extreme circles unless there were better grounds for it than the general consensus of opinion of the villagers round. If definite reasons were alleged which admitted of being grasped by the ordinary mind, and of tangible verification, the classification might be altered as the result of such verification. Otherwise similarity of appearance and soil as revealed by close inspection, coupled with similarity in other matters, including the former rate of assessment, were held to justify the assumption of equality with the surrounding villages.

The arrangement of circles in Kolagár and Iriyákot proceeded on the same basis, save that by the time the latter patti was reached I was becoming reconciled to the fact that nine-tenths of the villages were very similar if not absolutely identical in quality, and that, in consequence, attempts to seek artificial distinctions between them were somewhat relaxed. As the three classes of villages were held to be similar in the three pattis, there were only three circles of villages throughout the tract, as follows:—

Circle,	Rate per <i>dist</i> of second class dry.				Number of <i>maháls</i> .	
Superior	10 annas	...	...	20
Average	8 "	...	...	132
Inferior	6 "	...	...	30

It will be well to state here what will be discussed in more detail with regard to soil rates and assessments that the classification of two villages in the same circle does not mean that acre for acre they are of the same productiveness. It means in general that throughout the circle each class of soil exhibits the same character as in the remaining villages. Equality of productiveness, acre for acre, would, except accidentally, only occur in the case of villages in which the quantity of land under each class of soil was proportionately the same.

93. In Talla Salán the number of circles aggregated nineteen, amongst which however there were only five qualities. The number of circles could have been reduced to five had the example of my predecessor been followed and villages classed according to the revenue rates applied to them, without regard to either position or circumstances. But an endeavour was made to frame local circles instead of abstract ones, and the gain in fewness of circles that would have resulted from combining two or three of the former into one of the latter would have tended to obscure the real character of any. As regards the inclusion of all villages within large local areas into one circle, I had already after concluding the assessment of Malla Salán come to the conclusion that with no rentroll to check his classification, the Settlement Officer is very liable to go wrong if he attempts distinctions too minute. Geographical proximity and similarity are almost all the Settlement Officer has to go upon, and these will only be found useful if the classification proceeds upon a broad basis. The difference between villages in the same patti is more superficial than inherent. Each patti is split up into glens of usually five to ten miles in length, and the villages are, where the hill is not too high, situated about half way up the ridge on either side of the valley, while the cultivation of each frequently extends from the ravine to the hill top. In soil, crops, houses, products and general prosperity, there is a wonderful resemblance between each of the villages in the valley. In nine-tenths of the villages of Talla Salán the soil is identically the same, the product of the disintegration of mica schist with a greater or less admixture of stones detached from the rock beneath by the plough. In other cases, as in some of the midland villages of Búngi, the foundation is hard limestone rock the weathering of which produces a rich clay, while occasionally, as in Painon, there is a broad level valley, where the soil is a rich alluvial loam. These characteristics are nowhere, however,

The circles of Talla Salán.

confined to merely one or two villages. Crops, as a rule, depend on altitude. But rice grows freely up to 5,000 feet., above which elevation the number of villages is comparatively few. True, the best rice grows only in the valleys; but it can only be grown in land not only irrigated, but with an abundant water supply, and the amount of land of this description is insignificant. On the other hand, chillies will not grow in the hot valley, while in villages seemingly unfavourably situated on the top of lofty ranges, they are the staple product, as in Tolyún and Umedú-kí-bákhā in Painon. The bad climate of the valleys is also a serious drawback, while the higher villages usually trade in *ghí*. Native opinion holds those villages the best which are situated about half way up the hillside, which no doubt accounts for this being the usual situation. And the real source of prosperity which consists of employment apart from cultivation is equally open to all villages.

A list of circles in pargana Talla Salán is appended :

Name of circle.	Rate per <i>bísí</i> of second class dry.			Number of <i>maháls</i> .
	Rs.	a.	p.	
I. Bijlot Walla, N.-E. circle	0 6 0	...	8
II. Ditto S.-W. circle	0 8 0	...	29
III. Ditto E. circle	0 10 0	...	3
IV. Bijlot Palla and Búngi General circle	...	0 7 0	...	106
V. Ditto ditto Eastern circle	...	0 5 0	...	10
VI. Forest circle	0 5 0	...	123
VII. Búngi Central circle	0 10 0	...	5
VIII. Painon and Badalpur Malla, Central circle	...	0 7 0	...	142
IX. Painon N.-E. circle	0 5 0	...	6
X. Talla Badalpur and Síla, General circle	...	0 7 0	...	135
XI. Utáin circle	0 5 0	...	32
XII. Talla Badalpur, Central circle	0 10 0	...	3
XIII. Nayár circle	0 5 0	...	4
XIV. Malla Badalpur, Northern circle	0 10 0	...	5
XV. Kauriya Walla, General circle	0 6 0	...	28
XVI. Ditto Central circle	0 8 0	...	8
XVII. Síla, N.-E. circle	0 10 0	...	12
XVIII. Káladánda circle	0 5 0	...	19
XIX. Charekh circle	0 5 0	...	5
				Total ... 683

Regarding the method of classification adopted, the villages in each patti were on inspection divided into three classes; average, better than average and worse than average. As has already been stated, most of the villages in any given patti have a sort of family resemblance. Unless villages differed considerably from this type, and were decidedly superior or inferior, they were classed as average, though in some cases distinctions were made between villages which would seem to me now to be fanciful and artificial. Finally, where similar grades of villages in different pattis were locally contiguous they were formed into one assessment circle. The straggling nature of the pargana has been partly responsible for the comparatively large number of circles. In the map accompanying this report, distinction in colouring has only been made between circles of different values. In the maps on a scale of one inch to the mile which accompanied the pargana reports all circles and almost all villages were shown, but such maps for the whole district would be of unwieldy size. The present map shows the approximate position and extent of the various classes of circles.

Gangá Salán Circles.

94. In Gangá Salán the method of classification adopted was much the same as in Talla Salán. An endeavour was made however to keep in view the idea of the circle more than had been done in the latter pargana, locally contiguous and similar villages being classed together, irrespective of the patti in which they lay, although in the assessment notes villages are still described as first class, average, or third class, of the patti. Of course in many cases it was a matter of doubt into which circle any given village should go. This was particularly the case on the borders of circles; but in the

vast majority of circles there is a large and compact body of villages with an unmistakable family likeness. The following is a list of circles :—

Number and Name	Rate <i>per bisi</i> of second class dry.			Number of <i>maháls</i> .
	As.			
I. Forests and southern circle	...	5	...	88
II. Dabrálsyún circle	...	7	...	114
III. Ajmír southern "	...	7	...	11
IV. Kashyáli "	...	9	...	16
V. South Udepur and Chaurgaddi circle	...	7	...	111
VI. North Udepur circle	...	6	...	63
VII. Central Udepur "	...	5	...	10
VIII. Hyínl valley "	...	8	...	10
IX. Ganges and Langúrgarbi circle	...	5	...	99
X. Dhángú circle	...	7	...	18
XI. Nayár "	...	8	...	24
XII. Dádámándi circle	...	10	...	11
		Total	...	575

95. The circles of the northern parganas are even more comprehensive than those which have first been described. I believe this is due to the almost entire absence in the north of intermittent cultivation. In the lower parganas, owing to the absence of any special soil class for intermittent cultivation, villages with a large quantity of this had to be placed in a separate circle, as the application of ordinary rates to them was an impossibility. As many of the circles in the northern parganas are connected, a statement for the whole is given below :

Name of pargana.	12 annas.		10 annas.		8 annas.		7 annas.	
	Circle.	Number of <i>maháls</i> .	Circle.	Number of <i>maháls</i> .	Circle.	Number of <i>maháls</i> .	Circle.	Number of <i>maháls</i> .
Dewalgarh,	Srinagar circle.	10	Alaknandá circle,	41	Dhanpur circle ...	41	Dewalgarh circle.	196
Cháudpur,	...	...	Pindar circle ...	16	Kathulsyún and Nayár circle.	170	Chándpur circle.	20
			Rámgangá circle,	60	Ránigarh circle ...	15	Western Chándpur circle.	117
Badhán ...	...	...	Pindar circle ...	113	Báli and Nayár circle.	234	Chándpur circle.	
			Nágpur ...	19	Eastern Chándpur circle	229		
Total ...	...	10	Alaknandá circle,	249	Chauthán circle ...	66	...	333
			...	...	Badhán circle ...	156		
			...	...	Nágpur circle ...	265		
			...	...	...	1,176		

It will be seen that there is no circle of what may be called third class villages. This is probably due partly to the cause mentioned above, and partly to a second matter in itself perhaps the first cause of absence of intermittent cultivation, namely, that the ratio of cultivated to total area being appreciably less than in the south, there is more good culturable land, and people have not yet been driven to cultivate the more inferior soil. The small proportion of cultivated to total area in this part is exemplified by map No. 2, accompanying this report.

The Alaknandá Circle of Dewalgarh and Nágpur, the Pindar Circle of Chándpur and Badhán, and the Rámgangá Circle of Chándpur, are all characterized by good clay soil, or in the alternative first rate alluvial loam, and in general good level stretches of cultivation.

The Srinagar Circle consists of villages of about the same quality as those in the Alaknandá Circle, but differing from those villages by their nearness to Srinagar. The value of land close to this town is obviously greater than that at a distance, and the land has consequently always paid a higher revenue.

As regards the remaining circles, the distinction is mainly between the villages on a clay soil and the villages with a light soil. Where the rainfall is at all deficient the

former are far superior, but in places where the rainfall is usually ample, as it may be said to be throughout these parganas, the difference is not very great, more especially as the clay soil being produced by the weathering of a harder rock usually occupies the steeper slopes. In Nágpur, for instance, no distinction has been made between the class of villages on this account. In Dewalgarh, on the other hand, the distinction has been maintained, and except in Dhanpur patti the circles proceed fairly evenly on the difference in soil. In Dhanpur however, and in a few cases in the other pattis, villages on a clay soil have been classed in the inferior circle, on account of inferiority of crops grown (e.g. a large proportion of *chúá*), steepness of slope, excessive elevation, badly terraced fields, or other reasons. On the other hand, a few villages with light soil just above Srinagar have been placed in the superior circle on account of their other advantages. In Chándpur the distinction is generally observed except in the case of the western villages of patti Lohiba, and a few villages in pattis Taili and Síli, which adjoin Dúdátoli. The reason why these villages were placed in the superior Circle was in the main that they had hitherto been assessed at proportionately higher rates than the villages of western Chándpur; and although in soil and local situation the two classes of villages were identical, yet a reason was found for the difference in assessment in the fact of the nearness of the eastern villages to the pilgrim route. Adbadri, Lohbá, and Melchaunri are markets where all surplus produce can be disposed of at great profit, and one or other of these lie within five or six miles of any of the eastern villages; while all the western villages are at a distance of from ten to twenty miles (a matter of importance in a district where the only practical means of carriage is by coolies) and are, moreover, separated from the pilgrim route by a high range of hills. In Badhán the distinction is not regarded though most of the villages are on a clay soil. The distinction between clay and sandy soil is rather one for soil classification than for circle classification, as both soils frequently prevail in the same village.

Classes of soils. Natural soils, and native classification.

96. The quality of the soil throughout the hills varies according to the nature of the underlying rock, there being as a rule little or no subsoil. The layer of earth is hardly anywhere of great thickness, owing no doubt to the steepness of the hillsides, from which it is easily displaced by the rain. The broad valleys and level lands which are elsewhere the receptacles of this detritus, are non-existent within these hills, each stream rushing through a narrow gorge, the declivities on either side of which, so far from permitting the silt to settle, bury it forward into the river.

Natural soils for agricultural purposes are divided into clay or fine-grained, sandy or coarse-grained and loam or medium-grained. Owing to the nearness of the rock to the surface throughout the hills, pieces are continually being broken off and coming to the surface as stones, and these are a further factor in the constitution of soils in Garhwál. Where land is carefully terraced, the earth is washed out by the rain to a much smaller extent than if the land is allowed to remain at the steep slope of the hillside. Such terraced land in fact, frequently collects the detritus from the hillside above. Also by the course of time the stones are weathered into good soil, and in such old cultivation there are consequently few stones. In newly broken up land the stones are present in correspondingly greater proportion. The stones are used for erecting terrace walls, and where these already exist, the stones on the surface of the field, which are usually removed by hand after ploughing and before sowing, are thrown on to the top of the terraced wall. Nothing in the way of a rake is ever used by the people to remove stones, and they are never touched except at seed time.

Clay soil is known as *lwíntha*, red earth; but the more usual term, in the north especially, is *chopri*. In Talain the term *chopri* is applied to alluvial loam, containing of course a considerable amount of clay, but not with the characteristic red colour. Elsewhere, if a distinction is made, it is that *lwíntha* is too pure and hard a clay to make a good agricultural soil, whereas *chopri* is a clayey loam. Sandy soil is known as *balwán*, *ballán*, *reti* or *retuli matti*. In Choprákot the light soil that clothes

the slope of Dudātoli is known as *phúra matti*. The ordinary soil is that known as *kakrán*, *chachrán*, *kankriyábi matti*, a somewhat light loam mixed with small stones. If the stones are large, or plentiful, the soil is known as *gagrán* (rocky). A light loam is also known as *patli matti*, while *tinta matti* is a red soil resembling clay in colour, composed chiefly of sand. Soil so full of decaying organic matter as to be black is known as *kálá matti*. The classification is not always very accurate, and many natives when asked what they call the description of soil of which their fields are composed are at a loss for an answer.

97. Mr. Batten had six classes of soil, into which the nominal area of cultivated land was divided : first, second and third class irrigated, and first, second and third class dry. He also had the same classes for culturable land. Mr. Beckett, "with the object of preventing *amins* misrepresenting the quality of land" only regarded three classes of soil, irrigated, first class dry and second class dry. In the *khasra* there is another kind noted, namely, *ijrán* or periodical cultivation, which, like the other classes, was sometimes fallow and sometimes cultivated in the year of survey. In the present settlement it has been seen that it was not originally intended that there should be any classification of soils, though the Survey Department were required to note irrigation and *katil* in the irrigation column of the *khasra*. In May 1891, however, an addition was made to the survey rules prescribing the classification of dry soil as first or second class, instead of the entry of the rotation of crops in the remarks column. In December 1890 Mr. Partridge drew up some instructions to guide the surveyors in classifying unirrigated land into first and second class dry. If ascertainable, the land was to be classified as at last settlement, but where this was not possible the surveyor was to exercise his own judgment, having regard to the following considerations :—

Former and present settlement classifications.

- (a) land near the village site, if dry, will almost invariably be first class dry ;
- (b) land which ordinarily grows wheat and rice will almost invariably be first class dry ;
- (c) land which as a rule grows *jhangorá*, barley and *mandwá* only will nearly always be second class ;
- (d) outlying lands and lands far up the hillsides will generally be second class, and fields low down in valleys first class."

However, by the assessment rules sanctioned in July 1893, another class of land was added, namely, the *ijrán* or periodical cultivation of Mr. Beckett's settlement. By this time however the survey and *khánápurí* were nearly finished, and it was out of the question to demarcate this land, and the expedient was consequently adopted of classing second class dry land found under new fallow instead of under cultivation as *ijrán*. As, however, it has been seen in considering rotations of crops, that periodical cultivation is almost half the time cultivated and half the time fallow, it follows that the amount of land thus shown as periodical cultivation in the statistics is about half as much as it should be. Mr. Partridge was, however, of opinion that this classification was preferable to a separate demarcation of *ijrán*. He says : "I am quite aware that in places second class dry land, which is left fallow for a couple of years or so every now and then, and which strictly therefore should fall in the *ijrán* class, must have been found cultivated in the year of survey, and therefore has been entered in the second class dry instead of as *ijrán*. On the other hand, judging by what has been observed in the case of irrigable and first class dry land, it is highly probable that second class dry land which is regularly cropped was in places purposely thrown out of cultivation a year or two before the survey came round, in which case it will figure in the *ijrán* instead of in its proper class, the second class dry. This however is unavoidable. It was out of the question for the *amln* to make a minute enquiry in the case of every second class dry field he came across whether it was regularly cultivated from year to year or occasionally left fallow. If anything of the sort had been attempted, the figures would, I have no doubt, have been more unreliable than those we have. The *ijrán*

area would probably have been much larger than it ought to be, and the second class dry area proportionately too small." It is not easy to see why the difficulty in demarcation should be greater than in the case of first and second class dry, and why the amount returned by the surveyors as *ijrán* could not be checked by the amount returned under new fallow. The real difficulty, however, was that this class of land was not proposed by Mr. Partridge till October 1891, when the survey was well advanced, and not sanctioned till 1893, when it was almost concluded.

It will be seen, then, that the classification adopted was the same as that of last settlement, with the addition of *katil* or periodical unterraced cultivation. These classes constituted the assessable area. The unassessable area was classed as old fallow, *i. e.*, fallow of more than three years standing, culturable waste, and unculturable waste.

Defect of the system of classification.

98. The defect of the present system of classification is that it confuses totally distinct classes of land. Mr. J. B. Reid, the Senior Member of the Board, after inspecting some villages in Bārahsyūn, expressed his opinion in a note of the 3rd March 1893, that a better classification would probably have been—

Irrigated	...	{	(1) 1st class irrigated, irrigable from perennial streams.
		{	(2) 2nd class irrigated, irrigable from intermittent or variable streams or springs.
Regularly cropped terraced dry	...	{	(3) Home lands (<i>gharbārā</i> , <i>gharbāri</i>) round the hamlets, a generally well-marked area of land that gets more or less manure.
		{	(4) First class outlying.
		{	(5) Second class outlying.
Intermittent dry	...	{	Terraced (<i>ijrán</i>) { (6) Cropped,
		{	{ (7) Fallow.
		{	Unterraced (<i>katil</i>) { (8) Cropped.
		{	{ 9) Fallow.

The villagers themselves recognize not only two but three class of irrigated land. In the first kind the water-supply is perennial, and the fields are carefully levelled and can be flooded with an inch or two of water when required. In this rice can be sown at the regular time, in April. The second class of land is of the same sort, but water is not available till the breaking of the rains. Rice can be planted out into this in June, and it is then regularly irrigated, and will produce crops equal to those of the first class of land. Provided that there is a sufficiency of the first class of land to provide nurseries for the young rice as described in § 21, this class of land is hardly inferior to the first. Both are known as *serā*. The third class cannot be flooded with water in this way and so is not suitable for growing rice. It is frequently not well levelled, but water can be led thither by a canal, and it can be thus sprinkled occasionally. This is not called *serā*, but is known as *panchar*. Mr. Beckett only assessed *serā* as irrigated, classifying *panchar* as dry, from which it differs but little in value, to avoid too many classes of land. In the present settlement however both classes of land were classed as irrigated. Thus verbal accuracy was gained at the expense of substantial inaccuracy, and instances of this inequality have been given in the assessment reports, which it is unnecessary to repeat here. If classed as irrigated at all, this land should have been separated from the *serā* proper; though as the area of irrigated is less than 3 per cent. of the assessable area, except in the case of a few villages, it makes little difference to the assessment. But first class land includes two distinct species. The best dry land will grow rice and garden crops as well as wheat. Other land, on account of its height or poor quality, is cropped with *jhangora* instead of rice, followed by wheat. And the inclusion of periodical cultivation in second class dry has been already noticed. It has been seen that Mr. Batten's settlement, which, though made without a survey, was in many respects a more scientific one than those succeeding, recognized three classes of irrigated and three classes of dry land.

The *zarb bisit*.

99. The assessments throughout the cadastrally surveyed area of Garhwāl were based on the application, to the number of *zarb bisis* in the village, of the standard revenue rate for the circle. The method of obtaining this revenue rate will be reverted

to later on. But it is first necessary to explain what is meant by the term *zarb bisat* and to examine the effect of the application thereto of a uniform rate throughout a given tract. The number of *zarb bisis* is found by multiplying the number of *bisis* of each class of assessable land by a constant factor and adding up the products. The factor for—

Irrigated land is	..	...	...	...	3
First class dry is	...	...	...	...	1½
Second class dry is	...	...	...	...	1
<i>Ijran</i> (i.e., fallow second class dry) is			...	...	½
<i>Katil</i> is	...	...	...	...	½

In the parganas of Talla and Gangà Salán the factor for *katil* was taken as ¼. *Katil* there is to be found only on the steepest hillsides and is usually sown with the standard intermittent rotation noticed in the first chapter, viz., three crops in five years. In ordinary land the yield is three crops in two years. In this way, even if the produce were equal to that of ordinary land, the average yield would be only two-fifths. But the sparseness of the crop in such land is most noticeable; the seed is in fact very thinly sown, and the fact has been noticed by Mr. Traill. The measurement of this land is moreover difficult, and, I am afraid, not very accurate. It is difficult to keep the chain horizontal when working down a hillside sloping at an angle of forty-five degrees. I have been shown *katil* clearings of a nominal thirty-six *nális* in which the cultivator said that he could put only six *nális* of seed. Possibly this is an exaggeration, but a ten *náli* field taking three *nális* of seed is usual, and probably the ordinary rate, and the crop is only in proportion to the seed sown. So the correct rate for *katil* here would be $\frac{2}{5} \times \frac{3}{10} = \frac{3}{25}$ or about ⅓. Mr. Beckett was not far wrong in neglecting *katil* altogether. The only northern cadastrally surveyed pargana in which it exists to an appreciable extent is Chándpur, and there it is confined to villages near the Dudátoli range. The slope of the hills is for the most part very moderate and the *katil* bears little resemblance to the steep cultivation of the southern parganas, being frequently little more or less than badly terraced ordinary land. It is sown as thickly, and gives almost as good crops as the terraced land, and the difference is not such as to entitle it to reckon as one-quarter of the value of the latter.

The reduction of the whole area to a common standard by this method was invented by Mr. Beckett, and was one of the many manipulations of the figures which he contrived to enable him to arrive at a fair assessment, and to test it when made. Perhaps an even more important use made of it by him was in the distribution of the demand amongst the co-sharers. The factors now employed are not those used by Mr. Beckett in Garhwál, but those which his larger experience led him to apply in the Settlement of Kumaun. Inasmuch as irrigated land does not always represent twice the value of first class dry, or three times the value of second class dry, but usually some other figure; and inasmuch as first class dry by no means invariably equals one and a half times the value of second class dry, the assessments resulting from the application of uniform soil rates modelled on this scale are not exactly proportioned to the goodness of the land, but can only be approximations. But with the classes of soils laid down by the rules, any real soil rates were impossible, for the reason that, as shown in the last section, great varieties of soil were included under the same head in a single village. How was it possible, for instance, to frame one rate which should be suitable to the best *scrá* land growing a double crop yearly and at the same time to badly terraced land growing the same crops as unirrigated soil, but in which a sprinkling of water was occasionally used to germinate the wheat? Or what rate could be suitable at the same time to the vegetable gardens near the village and the outlying land which with difficulty grows a scanty crop of wheat? Clearly, then, with the classes of land allowed by the rules, any scientific and accurate soil rates were impossible. The somewhat primitive device of reducing all land to a common standard by one unchanged rule for all circles, instead of fixing rates for each class of land in each circle, which had been applied to the assessment of the first three parganas to come under assessment

was therefore followed for the rest of the district. The arrangement was better than the application of uniform rates to area irrespective of the quality of the land, and has the great merit of extreme simplicity. It has stood a thirty years test, and seems adapted to the primitive method of classification of land which made no endeavour to secure that the same class should represent the same sort of soil throughout the pargana, but considered each village as a thing apart and by itself.

The degree of approximation obtained by assessments with the *zarb bisī*.

100. It is generally found that, throughout a given tract, land will not be cultivated if beyond a certain degree of poorness. This land is, to use the economical expression, on the "margin of cultivation." It is true the hillman almost invariably professes to be cultivating for a subsistence, and, if this were the case, there would be no uniform margin of cultivation throughout a given tract; but this statement is open to suspicion. It will, as a rule, be found that land of this degree of badness is cultivated in every village in which there is room for extension of cultivation, as there almost invariably is. Between this and the best soil in the village the land is of every description. The similarity of the land in all villages throughout a given tract has already been remarked on in the earlier part of this chapter.

Let M be the quality of the worst cultivated land in an average village, N the best land recorded as second class dry, which will be supposed equal to the worst land recorded as first class dry, and P the best land recorded as first class dry. As the bulk of the land is recorded in these two classes, and the assessment depends on them chiefly, it will be sufficient to examine their case in detail. The fields in this village will be of all qualities, as follows, from the worst upwards: M, M + 1, M + 2 N - 1, N, N + 1 P - 1, P. Ordinarily the quality P, which may be taken to represent the best *gharbārā* land, will, like M, be found constant throughout a given tract, and conscientious classification consists in making the land on the border between first and second class dry equal to N throughout the tract. If, however, in any village the quantity of land of qualities M to N is relatively large, the tendency is to class the best of these fields as first class, and if the quantity of land of quality N to P is relatively large, the tendency is to class the worst as second class. If such a difference in classification extends over a number of villages it can be met by treating such villages as part of a separate tract; if it is confined to one or two, a certain quantity of land has to be transferred from first class to second class, or *vice versa*. Granting however that M, N, and P are constant throughout a given tract, it will be seen that the method of assessment by *zarb bisī* proceeds on the assumption that the average quality of second class dry is $\frac{M+N}{2}$ and of first class dry $\frac{N+P}{2}$ and that $3(M+N) = 2(N+P)$. The equation is based on Mr. Beckett's experience of the hills and with his classification was no doubt fairly correct. Owing to the severer classification of the present settlement, N has now a diminished value, and so the rate is a little hard on second class dry. The other proposition is hardly ever exactly true but is usually more or less approximately so. When the quantity of land of quality near N is in excess, first and second classes represent more nearly the same class of land than is given in the equation, but the two errors will balance and the assessment on the village will be approximately correct. But where the quantity of land approaching either M or P is in excess, the assessment will diverge more or less from what it should be according to the excess. When land of quality between M and $\frac{M+N}{2}$ is in excess, the village is a poor one; when land of quality between $\frac{N+P}{2}$ and P is in excess the village is a good one. Single or accidental cases of this kind can be met by lump deductions or additions to the revenue at standard rates of the village. General cases must be dealt with by separate circles. Talla Dhāngu is the most striking instance I can call to mind of the general excess of poor land; Pindarwār of the general excess of good land. In each case separate circles were framed. The remedy, however, only operates imperfectly, as of course not only is the revenue on the excess of bad fields or excess of good fields lowered or raised, but that on all the rest of the village. This is inevitable with the system

of classification ; but provided the total demand is fairly accurate, little practical injustice occurs in the distribution amongst the cosharers, as each, as a rule, holds land of all descriptions in the village.

101.—The sum obtained by the application of circle rates to the number of *zarb bisis* in the village is known as the "revenue at standard rates". This sum was not always fixed as the demand for the village. The most ordinary cause of departure from it was the incorrect classification of land. By this is meant the inconsistent classification of land alluded to in the last section, the failure to make the meeting point between first and second class correspond throughout a given area. Provided that the classification in neighbouring villages was consistent, it made little difference whether a little too much land was assessed as second class or a little too much as first class, though this would to some extent, disarrange the equation of value between first and second class. As a matter of fact though generally the classification was conscientiously made, it was in some instances, notably Nágpur, exceedingly inconsistent. This is hardly to be wondered at, considering the somewhat oracular nature of the instructions given to the surveyors. The "land growing wheat and rice" which was to be entered as first class, might obviously mean "land which grows wheat and land which grows rice" or it might mean "land which grows both wheat and rice." And similarly the "land which grows *jhangora*, barley and *mandwá*," which was to be second class. Most surveyors took as the first class "land which grows wheat and land which grows rice" a few took "land which grows both wheat and rice," and the *amin* who classified the soil in Dyúr Walla of Bichla Nágpur had such a conviction that "land which grows *mandwá*" should be second class, that he entered most of the best land of the village, which happened in accordance with the usual rotation of rice, wheat, *mandwá* and fallow, to be under *mandwá* in the survey year, as second class land. With the impossibility of making a scientific classification of the prescribed soils, there would have been no advantage in revising the survey classification throughout the district. Until I came to Nágpur I believed that this would be impossible, unless spread over several years, and even a revision of the classification such as was made there could not have been effected for the other parganas without considerably prolonging the time spent in inspection. It being thus impossible to inspect every field and revise the classification throughout, the general character of the classification was judged by those instances which came under immediate notice, namely the fields lying on either side of the path taken across the village lands, which were invariably compared on the spot with the trace of the village map coloured to shew the survey classification of soils. When inspection appeared to point to generally severe or easy classification (minute counterbalancing errors were not regarded, though sometimes noted in the assessment remarks) the crop statement of the village was carefully examined and the areas under the better and inferior crops compared with the area under first class and second class land respectively. From this could be roughly figured out the deviation from the general standard of classification, and a lump deduction or addition made to the revenue at standard rates for the difference. As any thing under two acres would not usually affect the sum of the revenue taken to the nearest rupee, no very minute accuracy was required. At the same time the errors in classification actually noted were left unaltered. To my mind it seemed absurd to correct merely those errors which came in the Settlement Officer's path across the village, whilst leaving alone the great mass of misclassifications. One field would be corrected and nineteen would remain wrong, while at the same time all the statistics and records of the village would have to be altered for the sake of a few square yards of land. Mr. Partridge though he admits that "without having the *khánápuri* done over again under one's own eye, it is impossible to answer for the classification of every one of the several hundred thousand fields", thought differently on this point. Though attempting no general revision of the survey classification, he notes in the reports of Bárahsyún and Chaundkot (not of Malla Salán) that "In one or two villages I have found a few fields beyond doubt first class entered as second class... These entries I, of course, had altered," and again

Variations from the re-
venue at standard rates.

"Fields which I should have said were second class dry have been entered as first class dry. In a few cases where there could be no doubt as to the proper entry I have corrected the record."

Alterations in the revenue at standard rates were also made for the reasons stated in the latter part of the last section, *viz.*, to counterbalance inequalities resulting from the system of classification. They were rarely made for any third reason. Steepness of the hillsides, climate, etc., for which Mr. Beckett had departed from his standard rate in the case of individual villages were all taken an account of in the classification of villages into circles.

The Assessments.

102. In the foregoing section has been described the machinery by which the revenue was distributed over the various villages of Garhwál. But the actual amount of the assessments rested ultimately on the fact, that it had been determined on general grounds, that at the present revision of settlement, the land revenue of the whole district was to be raised about fifty per cent. As stated by the Commissioner, Mr. Roberts, in his review of the Báralsyún assessments, this is an empirical and not a statistical determination and "arises from the necessity of the case...There is no rent as distinguished from revenue, and therefore the method of assessment on the rental assets cannot be employed. There is no possibility of accurately, or I venture to say, even approximately, calculating the gross produce of the soil, and if it could be calculated, there is no canon to guide the assessing officer in determining for a given village, what proportion of the gross produce should be taken as land revenue." It may be added that it is not uncommon for the inhabitants (all agriculturalists) of whole pattis to consume as food the whole gross produce of their land. Garhwál as a whole does not produce sufficient to feed its inhabitants, as the small exports to Tibet are far more than balanced by enormous imports from the plains. And such trades and manufactures as exist are insignificant. Taken on the whole it is not too much to say that the agricultural classes of Garhwál consume the whole produce of the fields. The revenue is paid out of their miscellaneous earnings. This being so, a settlement is in no sense an assessment of land revenue as the term is understood in the plains. All that can be attempted is the assessment of a fairly equitable quit rent. And this is justly taken in proportion to the quantity and quality of the land each man holds; and not on the miscellaneous earnings (though these really pay the revenue) as would be the case with a poll tax; because the man who holds land the produce of which is more than sufficient to feed his family is in a position of such enormous advantage over the man whose land is insufficient to feed his family, and who has to purchase out of his miscellaneous earnings, at very high prices, the provisions necessary to sustain their lives. But the amount of land revenue which can be assessed on the district as a whole is at present largely independent of its agriculture. Remove the miscellaneous sources of income, or even the principal ones, that is to say, forbid the Badrináth pilgrimage, stop all public works and operations in Reserved forests within the district, remove the Lansdowne cantonment, and interdict the employment of Garhwáls outside Garhwál and the amount of land revenue that could be collected from the district would be very small indeed. On the other hand as the amount of these earnings increases the land revenue may be increased with them. But it is hardly possible that with its increasing population, Garhwál will ever again be able to pay its land revenue out of the produce of its fields.

Revenue rates.

103. The problem before the Settlement Officer was: Given that the revenue of the whole district is to be raised fifty per cent, to distribute the enhanced revenue as equitably as possible, first over the different parganas and their pattis, and secondly, over the villages included in them. For the propose of the primary distribution, each pargana was taken up separately. At the time the work of assessment commenced, in fact until it was almost concluded, the area statistics compiled by the Survey Department were not available for the whole district, at least in a form that would much aid in a determination of the enhancement proper for each pargana, and if they had been they would have been of little value without local knowledge; so that the

determination of the enhancement proper to each pargana was of the same empirical character as the initial determination of the enhancement for the whole district. Each pargana was inspected and a general estimate of its resources made, and if possible compared with the resources of other parganas. In the first pargana to come under assessment, Báráhsyún, it was not possible except of course in a very vague and general sort of way to compare it with the other parganas or the district as a whole. But on the grounds that the average incidence on the cultivation at last settlement was lower than in any pargana of Garhwal except Ganga Salán and that it is now the most advanced pargana in the district, that the assessable area had, according to the statistics furnished, increased by one hundred per cent., and that the people of the pargana were fairly well off, it was decided Báráhsyún should bear an enhancement of 60 per cent. In order to distribute this enhancement over the assessable area of the pargana, Mr. Partridge divided the future demand, Rs. 28,355 by the number of *zarb bisis* 58,873, and this obtained a deduced revenue rate per *zarb bisí* of about 7 annas 8½ pies. Taking 7 annas and 9 pies to get round figures, this rate was applied to villages of strictly medium quality in the pargana, and higher or lower rates, according to the arrangement set forth in § 91, applied to the remaining circles in the pargana. The circles have for the sake of explaining the method of classification, been separately dealt with first, but there can be little doubt that practically, the classification of villages into circles and the formation of revenue rates proceeded contemporaneously, if indeed the latter proceeding did actually not anticipate the former, as the priority accorded to it in the Báráhsyún report, and the account already quoted of the classification of patti. Ráwatsyún might lead one to suppose. The enhancement determined for Chaundkot and Malla Salán was not deduced *a priori* as in the case of Báráhsyún but determined by a comparison with the latter pargana. Thus if a village in Chaundkot was thought similar in quality to the villages of Báráhsyún which had been placed in the circle paying Rs. 0-9-3 per *zarb bisí*, the Chaundkot village was also assessed at Rs. 0-9-3. The resulting pargana demand was the sum of these village assessments. There was no deduced mean rate and no selection of an average type of village.

My own procedure in distributing the assessments over parganas, and framing revenue rates was somewhat different to this. Although, somewhat misreading the assessment rules, I framed *a priori* opinions as to the enhancement to be obtained from any given pargana, these were subsequently more frequently departed from than followed, though the experience thus gained of such predictions was probably useful in the assessment of the non-cadastrally surveyed tracts. For instance in Dewalgarh the enhancement came to sixty per cent. instead of the predetermined fifty and in Ganga Salán to fifty five instead of sixty, and probably in these cases second thoughts were best. But what chiefly influenced my enhancements was the fact, which invariably confronted me in each pargana in turn, that at the lowest estimate and making every allowance for the difference in the system of measurement employed at last settlement (and this usually meant adding forty per cent. to the assessable area of last settlement) the increase of cultivation was not less than fifty per cent. and frequently sixty and seventy. This being the case it was obvious that the greater part if not the whole of an enhancement of fifty per cent. of revenue, must if distributed rateably over the whole existing cultivation, fall on land which was unassessed at last settlement. Taking also into account that in some cases villages had been at last settlement assessed at very low rates for causes which no longer existed, it became evident that no enhancement could be given to land which had been fully assessed at last settlement and remained unchanged since, if the total for the district were to be restricted to fifty per cent. This simplified the framing of revenue rates considerably. After having classified villages into circles it was only necessary to examine the case of villages in it which appeared not to have increased in area or quality since last settlement, and to frame a rate such that applied to these villages, the demand would remain constant. Where there was no such village in the circle, a rate might be found by considering similar circles in which there were such villages, or a certain number of villages in the circle were considered and the rate calculated which would be required to give each an enhancement fairly proportional

to the increase in cultivation and prosperity, the rate finally chosen being about the mean of these rates. The rate could then be applied to other villages of the circle in the assurance that any enhancement would fall only on land underassessed or unassessed at last settlement. Any rate less than this was impossible. It would have resulted in general and unnecessary reductions of revenue. And a higher rate—as has been suggested to me, a rate which would give some enhancement to those people who held only fully assessed old measured land on account of increased value of produce—would produce more than the fifty per cent. to which the enhancement was to be limited. It was then by means of revenue rates framed on this principle that the distribution of the enhancement over the remainder of the district was carried out. The system was not, however, employed in its entirety till Gangá Salán, the fifth pargana, came to be assessed. In Talla Salán it was applied to the average villages of each patti, but for the superior and inferior classes arbitrary rates were chosen which it was thought would give suitable enhancements. In the three pattis of Malla Salán rates were similarly chosen; that for average villages being deduced from the fact that the incidence in the rest of the pargana was between seven and eight annas, that as inferior villages were more plentiful than superior ones, the average, *i. e.*, most frequently occurring village, must be assessed a little higher than the mean incidence on the pargana, and that the application of the rate did not give enhancements disproportioned to the advance of individual villages.

Generally speaking though the revenue rate may have some basis of fact, the circles to which they are applied are no doubt purely empirical, *i. e.*, based on the Settlement Officer's opinion and not on any statistics. Another Settlement Officer or a revising authority might have a different opinion as to the equality of villages which have been classed as equal, and there are no rents or other means by which the equality of villages can be tested. It is for this reason that the circles, particularly in the latter part of the assessment have been constructed on very broad lines; it was thought less likely to cause injustice to lay down a single standard for all villages which bore a general resemblance than to assess each as a unit requiring separate treatment. The circles are empirical, but they are not arbitrary. And to avoid prejudice in the classification, it was made in the field before the statistics of the village had been seen, and in nine cases out of ten this classification was subsequently sustained. The assignment of revenue rates usually proceeded concurrently with the framing of the circles, but in cases the revenue rate was not fixed till the circle was complete, as in the Ránigarh circle of Chánpur. The reverse process was never followed, *i. e.*, of selecting the rates first, and classing the villages so as to fit in with them.

Tests applied to the assessment of individual villages.

104. After the assessment at standard rates of the village had been determined and modified where necessary in the manner described in § 101 on account of defective classification of soils, or the particular poverty or goodness of a portion of the village lands, the resulting demand was tested to see whether it was suitable to the progress made by the village since last settlement. The tests applied were as follows:—(1) To the last settlement area was added a percentage varying from one third in the case of fairly level villages to one half in those steeply situated to allow for difference of measurement, and the increase in cultivation was then compared with the increase in assessment, (2) the increase in population was compared with the enhancement of the demand, and (3) the incidence on the population was considered. If tests (1) and (3) shewed the new assessment to be fair, while (2) shewed it to be wrong, *i. e.*, if the enhancement was proportionate to the recorded increase in cultivation since last settlement, and the incidence on the present population was not unduly high but the enhancement was excessive considering the increase in population, then it was tolerably certain that the last settlement measurement was defective and the old assessment consequently too low. If test (3) alone shewed correct and a careful consideration of the case shewed no material difference between this village and others, it appeared that the last settlement assessment was made anomalous for causes no longer existing. If all three tests shewed that the new demand was disproportionate, the position of the village in the circle was reconsidered, and unless there were special reasons to account

for the difference, *e. g.*, cultivation of some of the assessable area by another village, transfer at the present survey of superior land to the assessable area of another village, or *vice versa*—matters which frequently came to light when the assessment which seemed improper was further enquired into—or unless in spite of unexplained differences the Settlement Officer was positively sure on general grounds of the equality of the village with others in the circle, the circle classification of the village was altered. These tests, resting as they did on the revenue hitherto paid by the village, were as little empirical as any that could be devised for Garhwál.

105. The prescribed test for the adequacy or otherwise of the new demand was the valuation statement. This consisted of the estimated total produce of the village worked out according to the different classes of soil. Very careful enquiries were made from hundreds of people in hundreds of villages by Mr. Partridge before he framed the valuation statement for each class of soil in each of the thirty-seven circles of the Bárahsyún pargana, besides cuttings of crops conducted under careful supervision. The figures thus arrived at were estimates of the average yield spread over a series of years good, bad and indifferent. But he was careful to state that “these figures have no pretence to accuracy. Accuracy in a matter of this sort is absolutely impossible.” In calculating the prices obtainable for the produce too, the most careful and extensive enquiries were made, and the rates taken were those which generally prevailed a month or so after harvest ascertained by enquiry from the people throughout the pargana. Mr. Partridge says “The ‘money and grain rents paid by *sirtáns*’ have not helped me at all in framing my average estimated produce values ... for the rents entered appear to be generally fictitious; nor have the prices that have been paid by purchasers of land of recent years been of much assistance, for in five sale deeds out of six a fictitious price seems to be entered, with a view to warding off any suits to enforce a right of pre-emption, and it is generally impossible to get at the actual sum which changed hands.” The prices entered are those obtainable from sellers in villages, not those ruling at *bazárs*. Most villages have no *bazár* near where they could dispose of their surplus produce, and carriage to a distance is expensive, at the ruling rate of nine pies *per maund per mile*. A list of the prices adopted is annexed:—

The valuation statements

Paddy	...	...	18	<i>páthas</i>	about	62	lbs	<i>per</i>	Rupee.
Wheat	...	...	10	„	„	41	lbs	„	„
Mandwá	...	...	20	„	„	79	lbs	„	„
Jhangora	...	...	21	„	„	79	lbs	„	„
Barley	...	...	20	„	„	81	lbs	„	„
Til	...	...	10	„	„	31	lbs	„	„
Gahat	...	...	16	„	„	71	lbs	„	„

But even granting that these prices were uniform for the articles they represent, the application of uniform produce rates to fictitious classes of soil must result in fictitious produce values. Thus Mr. Partridge:—“For instance in a circle containing say twenty villages there may be a little *sera* (irrigated land) in perhaps eight of them. In two of those villages the irrigated land is perhaps *dofasli*, growing crops annually worth perhaps Rs.50 *per bisí*; in the other six it is *ek-fasli*, the water supply being deficient, and the crops *per bisí* are not worth more than Rs. 30 annually.” But the prices are not uniform either for each kind of produce or for each village in the pargana or in the same village two years running, as the difficulties in communication in a district like this make the local price of grain dependent entirely on the most minutely local harvest. For instance rice grown in irrigated land (*dhán*) invariably fetches a higher price than rice grown in dry land (*sáti*) and the quality of irrigated rice and therefore its value varies to the extent of one hundred *per cent.* according to the available water-supply. *Kimilli* is less valuable than *hansráj* and *hansráj* than *básmatti* and the water-supply required for each is in direct proportion to its value, and the varieties of rice are practically infinite. And in the matter of first class land it is much the same. The pepper patches near the dwellings have not the same productive value as the grain lands, though both being included in the same soil class must have the same valuation rates applied to them.

For the rest of the district these Bárahsyún rates have been accepted unaltered for circles of similar values. It would be a tedious matter to give here these values for each crop in the one hundred and thirty-five classes of land in detail. The total values of the estimated gross produce for each pargana are contained in Appendix VI. They are to quote Mr. Partridge's words, probably "as near an approximation to the truth as can be guessed at." The detailed calculations on which they are founded are given in Appendix VIA, while the produce values of each circle together with the proportion taken as revenue are given in Appendix VII, which contains the totals of the Circle Register.

Assessments differing
from standard rates by
more than ten per cent.

106. A list of villages in which the assessment differed from the demand at standard rates by more than ten per cent. was required to be submitted to the Board for sanction along with the pargana reports, apparently in order that the revising authority might ascertain that the assessment was being conducted on a basis of strict circle rates, and with due regard to method and order. The departures from standard rates to this extent for any other reason than to remedy inequalities caused by the defective classification are, as has been stated, exceedingly rare. And those made to remedy such inequalities can hardly be called such a departure from the standard rate as is contemplated by the rules, which would rather concern such matters as inability of the village to pay the full assessment. In the case of Nágpur, where the classification was revised in detail, it was only found necessary to assess one village at a sum differing from the revenue standard rates by ten per cent. and this one was due to the system of classification of soils. In a few cases the assessment differs from the revenue at standard rates because it was thought unnecessary to reduce the old demand, and in one case because it was thought inadvisable to enhance it. In most cases the differences occur in the case of very petty estates, nearly half of them with a demand of less than Rs. 10, in which any departure whatever from the standard rate must be a departure exceeding ten per cent. as both the revenue at standard rates and the proposed demand are framed in whole rupees. A list of these villages is given in Appendix IX to this report.

Intikhab or khetbat.

107. When the land came to be measured up at last settlement, it was found in many cases that fields, which were as far as position was concerned an integral part of one village, were cultivated from another, and had always been assessed as part of the latter village. No doubt in the earlier absence of land records it was found convenient to identify the land with the people cultivating it. At last settlement such fields were measured in the *khasra* and map of the village in which they geographically lay, but in the *phánt* or revenue roll, they were transferred to the village which had hitherto paid revenue for them, and this process was known as *intikhab*, (selection) or *khetbat* (field division). As the revenue was assessed on the land as given in the *phánt* it became an exceedingly difficult matter to ascertain in such cases what was the revenue paid by the land represented by the map of any one village. This was emphasized in cases where natural calamities, hail or flood, rendered it necessary to remit revenue. Moreover land of the same quality in the same map paid different revenue rates according to the village in which it was included. The inconveniences of this system and the impossibility of satisfactorily inspecting and assessing as one *mahál* fields scattered over half a dozen villages, led to the abandonment of this system at the present settlement except in Bárahsyún pargana. The land shown in each map was taken as the unit of assessment. Where, as in the case of Náli and Badoli in Ajmir, the fields of several *maháls* were so interspersed that they had been all measured on one map, no difficulty occurred. The lands of all three were assessed at the same rate. But when a village mapped by itself held also by way of *intikhab* a few fields in another village, the latter were assessed at the rate applied to the latter village. But it would have been a source of great confusion to have included in one *mahál* land included in different assessment circles. Accordingly such land was cut off from the *mahál* which had hitherto held it by way of *intikhab* and included in the village within whose boundaries it lay. Owing, however, to a great outcry of the people concerned at what they considered an infringement of their rights, chiefly the *padbáns*, whose dues

being proportionate to the amount of revenue collected, here and there underwent some slight change, and to the fact that in one case the Commissioner in appeal directed that the *intikháb* of two villages in Chaundkot should be allowed as heretofore thereby including in the same *mahál* land of two different assessment circles, a concession was made. The settlement records were in every case arranged throughout according to the village map, and the revenue roll or *phánt* thus agreed with the land within the village boundaries, but instead of copies of this being distributed to the padhás by which they should regulate their collections, *phánt*s were compiled containing selected entries from the settlement *phánt*s relating only to those cultivators who belonged to the padhán's village. To take a very simple case, supposing A, B, C, X, Y, Z, appeared in the settlement revenue rolls of two villages, A, B, C residing in one, and X, Y, Z in the other, the *phánt* for the *málguzár* of A's village would contain the entries relating to the land of A, B and C in both villages; similarly the *phánt* for X's village. To avoid any future confusion the amounts for both villages were separately entered, those for the village in which the land was measured in black ink and for others in red. The *málguzár*'s and *thokdár*'s dues were calculated according to the amount shewn in the *intikháb phánt*. This arrangement afforded perfect satisfaction and at the same time avoided more confusion than was necessary. In the non-cadastrally surveyed patts, as there was no survey, the old *intikháb* had of course to be allowed to stand, a matter which occasioned some difficulty, as it was not easy to tell in such cases what extent of new cultivation belonged to each village. This was particularly the case in Band patti where one village Hát has no map at all, consisting entirely of fields taken from other villages by *intikháb*. In such a case it was impossible to say without a survey what part of the new cultivation in these several villages should be credited to Hát. The villagers' word had to be taken in the matter.

108. The non-cadastrally surveyed part of Garhwál includes the following parganas and patts:—

The non-cadastrally surveyed tract.

Badhán ...	...	...	Patts Pindarpár and Nandák.
Nágpur ...	...	...	Patts Káliphát Talli and Malli, Nágpur Malla, Maikhandá, Bámsu and Parkandi.
Dasauli ...	...	...	The whole.
Painkhandá	...	...	The whole.

The method of settlement was a subject of much discussion; it was at one time proposed that all new cultivation should be measured up and shewn on the old maps, and rules were framed to regulate the assessment. But it was finally laid down in Government Order No. $\frac{2381}{1566A}$, dated 31st August 1894, that the expense of such a survey could only be justified on the ground of its necessity, and that as the total enhancement for the district had been fixed at fifty per cent. there would, after the settlement of the cadastrally surveyed patts had been completed, be a definite balance to be obtained from the non-cadastrally surveyed parts which the settlement officer could, by his local knowledge, allot to the various patts in the same way as the pargana distribution had been made in lower Garhwál, while the distribution of the allotment over the various villages of the patti could be carried out by the padhás themselves, assisted, if necessary, by the patwaris. It has been seen that a similar method of assessment was adopted by Mr. Traill. There were no hard and fast rules laid down and the conduct of the settlement on the general principles laid down in the Government Order was left to the discretion of the Settlement Officer.

109. The conditions of the settlement precluded anything of the nature of a record of rights, but still for each village a list would be required showing what people were to pay the new demand. Such a list already existed in the *phánt* or revenue roll and this was the only record of rights drawn up by Mr. Batten in a settlement made like the present one without a survey. The list was, however, very incomplete owing to unrecorded mutations, and also to rights in cultivation made since last settlement, which, of course, would now be assessed to revenue. There was no hope of the villagers revising the *phánt* by themselves, and the work was therefore undertaken by Govern-

Revision of the *phánt*.

ment agency, under proper supervision, as a preliminary to the assessment. The Settlement Deputy Collector undertook this revision in the tract west of the Alaknanda (Nágpur) together with Painkhanda; the Deputy Collector in charge of the northern sub-division, who is very lightly worked, the remainder of the tract east of the Alaknanda. Detailed instructions were given to them, the general purport of which was that they were to proceed to the patti, to call up all the co-sharers and *kháekars* of each village in turn, to read out the old *phánt* enquiring whether each man entered in it was in possession of his share and if not who represented him, and finally to enquire what new proprietors or occupancy tenants there were in the village and how they became so. Special attention was to be paid to unrecorded union or partition of sharers and to co-parceners of undivided joint families. A new draft *phánt* was to be written out there and then according to the information received, and again read out, and amendments made, until the whole was approved as correct by the villagers. This "skeleton *phánt*," as it was called, was to contain the names only, with no record of the area held or the revenue to be paid, for, as the former included the new unmeasured cultivation and the latter was not yet settled, neither were known. A copy of the draft *phánt* was to be posted up in the villages, and notice given that for a month's time objections to it would be taken into consideration. After that the *phánt* would be finally approved.

Estimate of the area under cultivation.

110. I also asked the two Deputy Collectors deputed to this work to make enquiries into the extension of cultivation in each village, and to make a rough estimate, if possible after actual inspection of the village, of the total amount of cultivation in existence there. Unfortunately both misinterpreted these instructions. Instead of estimating the *whole* cultivation roughly, say in tens of *bísis*, they proceeded to try and measure up the *new* cultivation with the help of *amins*. Of course it can in some places be asserted that such and such a field is new cultivation, but there is a great deal of new cultivation which consists in mere extensions of old fields into surrounding waste and of these no such measurement can take account. This measurement is therefore bound to be less accurate as regards the total cultivation than an intelligent estimate would be. Moreover, the measurement left out of account other matters, such as the amount of last settlement (measured) old fallow which had since been brought under cultivation. The *amins* too, frequently measured uncultivated old fallow to get what they thought would represent a fair amount of new land in each village. However, except in a few cases, by Pandit Manik Lal, no attempt was made to map cultivation, and the whole operations were carried out expeditiously and inexpensively. The trouble taken over these measurements in the case of both Deputy Collectors, led the *phánt* work, really far the most important of the two, not perhaps to be neglected, but to have less attention paid to it than it deserved, with the result that the "skeleton *phánt*s" were not so accurate as they should have been. This is partly the fault of my directions, which did not call attention sufficiently to the necessity for recording new *hisselárs* and *kháekars* in unmeasured land, but also partly to a neglect to follow out the prescribed procedure. In many villages the draft *phánt* was never even posted up at all. Pandit Manik Lal entered on the work in January; Pandit Dharmanand in February. Both officers concluded their work in May 1895.

Inspection.

111. The inspection was made during the latter half of April, May, June, the first week of July, and the last three weeks in September. The general plan adopted was to go over the whole patti and get a look at every village, without making any attempt to go into each, and at the same time to compare it with the last settlement map and see the quality of the palpably new cultivation as compared with the old; also if possible, to get an idea of its quantity. At the same time the appearance of the village was observed, and enquiries were made regarding the means and condition of the inhabitants. The Deputy Collectors furnished me with abstracts of their measurements shewing the new cultivation in each *tok*. The *amins*' measurements could thus be checked and where it was found that they had measured old fallow an allowance was made off the Deputy Collector's figures. As far as possible it was also

observed what quantity of land measured at last settlement as old fallow had since been cultivated, and what cultivated land had fallen waste. As might have been expected all or almost all the palpably new cultivation was in inferior land, but as I have already stated, the palpable new cultivation by no means exhausts the sum. However in the statements only the palpable new cultivation has been shewn, as the quantity of the rest may be guessed at and may be taken into account in assessment; but it would be hopeless to attempt to put down figures for each village. For the same reason irrigation made since last settlement in land then measured, is not shewn, though no doubt considerable. The figures given are those set down by the Deputy Collectors, corrected by the addition of last settlement measured fallow now cultivated, and by the deduction where necessary of old fallow measured as cultivation by the *amīns*. The only exception to this procedure was in the case of the upper villages of the Niti Pass in Malla Painkhanda, where the Deputy Collector's measurements, no doubt owing to their having been made at a time when no crops were on the ground, seemed to me so hopelessly below the correct figure that I substituted my own for them. In the case of Malla Painkhanda, which was not measured at last settlement, the land has been roughly classified into irrigated, dry and *katil*. In the remaining pattis all new cultivation, unless it was irrigated, has been classed as second class dry as has also been last settlement fallow now cultivated.

112. The basis of the assessment was the determination by the Settlement Officer of a definite sum as the new demand for each patti. Once fixed, this was never altered, and the new demand of the various villages of the patti had to be so arranged that the total amounted to this determined sum, neither more nor less.

The assessment.

The patti assessment was fixed with regard to all available statistical and local information. The inspection made in the manner described in the last section gave a fairly good idea of the resources of each part, and these were compared with those of adjoining pattis in the cadastrally surveyed area. There were also figures for the increase of population since last settlement, which formed some guide to the progress made. The percentage of new cultivation found by the Deputy Collectors, was increased by an estimated ten per cent., sometimes more, sometimes less, for unverifiable increase in cultivation. These figures also formed the basis of comparison with pattis of the cadastrally surveyed tract, and between pattis of the non-castrally surveyed tract *inter se*. The number of cattle in each patti was also compared, though as the number of these, is, in the part in question, to a certain degree in inverse ratio to the goodness of the land, the villages agriculturally poor being more pastoral, and *vice versa*, it is doubtful whether perhaps too much stress was not laid on this matter. The bearing of each of these factors on one another was also considered. The considerations which finally determined the enhancement for each patti have been gone into at length in the pargana assessment reports and it is not necessary to repeat them here. The enhancement was usually determined in the form of a percentage on the old demand.

After this sum had been determined, the *padhāns* and *thokdārs* of the patti were assembled at some convenient place, either in the patti or on the borders of it, and they were given the amount to divide up among themselves. This they hardly ever succeeded in doing, except in cases where the distribution was practically made by the *patwari*. The assessment was usually distributed among the villages in a *panchayat* of *mālguzārs*, with the *thokdārs* as assessors. The villages were called out one by one; the *mālguzār* of each was called up and asked how much in his opinion was due to his village as the share of the patti enhancement. Sometimes he gave an opinion; sometimes he would not. Then the *thokdārs* gave their several opinions, and then any one else among the *mālguzārs* who wanted to give his opinion gave it, and if necessary the *mālguzārs* of adjoining villages were asked their opinions. The Settlement Officer then settled the new demand. In this way trial sums were fixed for each village. Any excess or deficiency in the total of these trial figures was liquidated or made good by reductions or enhancements either for all villages or for those only

which in the opinion of the *mālguzárs* were most suitable for such treatment. Whether the assessments were settled in open *panchayat* in this manner or by the *mālguzárs* themselves, I made no scruple in altering the sum fixed for any village if it seemed inequitable, though small differences were left alone. The propriety of the new assessment was tested in each case by comparing its incidence on the estimated cultivation, the population and the cattle. The value of the two last tests is greatest in indicating whether the village is deficient in either cultivators or cattle, and whether it is or is not safe to assess up to the full average rates on the cultivated area, rather than as indicating the sum at which the village may be assessed.

For the non-cadastrally surveyed tract, as far as possible, similar statements were prepared to those prescribed for the cadastrally surveyed area, and full assessment notes were written on each village.

Malla Painkhanda.

113. In Malla Painkhanda, for various reasons, the method of assessment differed from that adopted in the rest of the non-cadastrally surveyed tract. It comprises the country lying within the Niti and Máná Passes and is unlike any other part of Garhwál. It was not measured at last settlement with the exception of one village "by reason of the snow" according to the notes in the village records. Sir Henry Ramsay added that "the operation would obviously have been useless." There is, however, a considerable extent of cultivation, nearly one thousand acres according to the estimate now made, among twenty-three villages—an allowance not much inferior to that in the rest of Garhwál. Cultivation is sometimes on level pieces of land along the river, sometimes on the hillside and very badly terraced, and sometimes consists of forest clearings, which are cultivated two or three years in succession and then abandoned till shrubs have again grown up in five to ten years time. There being little or no rain to wash down the soil, there is little difference in productiveness between level and sloping land. Agriculture is carried on at heights varying from about 8,500 feet above sea level at Ríni to 11,500 at Niti. In the Máná Pass, only *chutá* and *phápar* are grown. In the Niti Pass wheat, barley and mustard are also raised, but only in irrigated land. The most important crops are barley, the outturn of which in the best land is equal to that in the rest of the district, and *phápar*, of which the outturn is said to average ten *páthás* to the *náli* of land, value about eight annas, or about Rs. 10 to the acre, though it is probably frequently double this. The value of barley here is 6 or 7 *páthás* (25 to 30 lbs) to the rupee.

Fiscal history.

114. It is necessary here to briefly recapitulate the fiscal history of this part which differs to some extent from that of the rest of the district. The quotations made are from Mr. Traill's "Statistical Report on the Bhotia *Maháls* of Kumaun."

Malla Painkhanda, or the greater part of it, appears to have been originally colonized from Tibet. "Personal appearance, language, religion, customs and tradition all unite in pointing the origin of the present inhabitants to the adjoining Tartar province of Tibet." "Bhote for a considerable period subsequent to its colonization formed an integral part of the mother country. The trade carried on by its inhabitants rendered them in some degree dependent on the will of the neighbouring Cis-Himalaya chiefs; but they were long able to repel the contracted efforts of the latter made for their subjugation." When the petty principalities of Garhwál became united under one Rájá, the result was the conquest of Malla Painkhanda which took place about four centuries ago. "In becoming subject to the Cis-Himalayan power, the Bhotiyás were by no means withdrawn from their allegiance to the parent state, but still continued to acknowledge the supremacy of both—an anomalous state of subjection which their paramount interests in continuing to be the medium of commercial intercourse between Hindustan and Tibet will tend to perpetuate." In 1825 A.D. the revenue demands of the Tibetans consisted of *sinh thal* (land revenue); *yá thal* (tax on sunshine) and *kyún thal* (tax on the profits of trade). The *sinh thal* was assessed at twelve *polas* (cakes) of *gur*, about one rupee in value, per *konch* on the *khálsa* lands (the extent of a *konch* is not stated). But as a great portion of each village was rent free under former grants, the aggregate payments under this head were very trifling.

The *yá thal* was assessed at one cake of *balma*, or dried yeast, per house. The *kyán thal* was levied in the shape of transit duties, *kyán kal*, at the rate of ten per cent. on grain, which was taken at the first mart visited by the Bhotiyás, but only on the first investment of each trader during the season. The load of every tenth sheep together with the wool on its back was taken. As the duty was levied according to an ancient tariff, broadcloth and many articles the export of which commenced at a comparatively recent date, passed untaxed.

The revenues "exacted by their Hindu conquerors" [from the Bhotiyas] "have ever been more costly and more extensive. On their final subjugation, the Bhot *maháls* were subjected to a tribute in gold dust." No revenue appears to have been ever taken by the Garhwál Rájás from the villages in the Máná Pass. These were from the first granted in religious assignment to the temple of Badrináth, which is situated in the pass. But in the Niti Pass the assets made available to the Government demand comprised :

1. Profits of trade.
2. *Tandkar* or loom tax.
3. Produce of agriculture.
4. Produce of jungles (roots and drugs.)
5. Musk.
6. *Kota báz*, hawks.
7. *Bhaunra* or wild bees nests.

In the original kanúngo records, not now available, the assessment was made up of separate sums under these heads. The aggregate tribute on the Niti Pass was 206 *damola* of gold, equal to 103 tolas. The Bhotiyás were also liable with other subjects to extraordinary demands on occasions of war, etc., but as their assessment included a tax on trade, they were exempted from the payment of transit and *bazár* duties throughout Garhwál. This tribute was for mutual convenience commuted into silver and goods. The equivalent in silver was Rs. 12 per tola, and a fixed and permanent valuation was made of the various commodities received in payment. "As the market prices of these articles fell below the rates in the original schedule, it became the object of the Bhotiyás to extend their payments in them : the proportion was ultimately established at one-half in kind and the rest in coin ; and in the event of the Bhotiyás being required to pay the whole of their assessment in money, a deduction of twenty-five per cent. was allowed on the portion payable in merchandise, such being in point of fact the actual depreciation in current prices from the rates fixed in the original appraisement. During the Government of the Rajas, the public demand continued unaltered." The Government revenue was imposed on each pass in one sum and the detailed assessments left to be settled by the *bárhás*, or village headmen, among themselves. The tribute was apportioned by them, being levied every third year wholly on the land, and in the interval in the shape of a property or capitation tax.

When the Gurkhas conquered Garhwál, the "resistance on the part of the Bhotiyás, joined to an exaggerated reputation for wealth, marked them out for peculiar exactions." As against the demand of Rs. 1,200 under the Rájás, the assessment rose to Rs. 7,000 in the Niti pass, "while in some years nearly double the sum was extorted under various pretences by the officers employed in the collection." This resulted in the dissipation of the capital and stock of the Bhotiyás, who finally, when their means and credit were exhausted, took to emigration. The Nepal Government hearing of this, sent "an officer of reputation" to resettle the Bhot *maháls*. The revenue in the Niti pass was reduced by him to Rs. 4,700.

115. On the introduction of the British Government in 1815 A. D. the authorized collections of the two preceding years were assumed as the standard for the current year, but as the whole demand was made payable in coin a deduction of twenty-five per cent. was granted on the half till then payable in merchandise, and a further deduction to the same amount was allowed as discount on the Gurkha currency. The total assessment in the Niti pass was thus reduced to Rs. 1,016. "In the year 1875

Taxation by the Garhwál.
Rajas.

The Gurkha assessments.

Early British settlements.

Sambat (1818 A. D.) a general abolition of the customs and transit duties throughout the province took place; the tax on the profits of trade hitherto levied from the Bhotiyas, as partaking of the same nature was included in that measure: a partial remission on the same account was made in the *jama* of some of the lower villages, while both in these and in Bhote, the items of musk, bees-wax, and hawks were struck out of the available assets." Thus the demand was reduced to Rs. 436 in 1880 Sambat, and in subsequent years a progressive rise took place on account of increase in cultivation, brought about principally by the return of people who had emigrated during the Gurkha Government.

Mr. Batten's settlement.

Mr. Batten was of opinion that "Mr. Commissioner Traill had made an excessive sacrifice of revenue when he introduced his nominal land tax and calculations of *bieis* into the upper parganas, because there being no surplus produce from which rent or revenue could be derived," a land tax appeared to him absurd. It is satisfactory to note, however, that although Mr. Batten obtained the sanction of the Board to assess villages on their general capabilities, he, "with some slight reductions in the case of two broken down villages kept the Government demand for Malla Painkhanda unaltered."

The last settlement.

Mr. Beckett modestly dismissed the Bhot maháls in his settlement report of 1866 with the remark that all the information regarding them had been fully given in the printed reports already referred to, though he mentions that "of late years the value of borax has fallen so low that a very limited quantity is brought from Hundes." Nevertheless he raised the assessment of the Niti pass from Rs. 537 to Rs. 826, an increase of over fifty per cent. It has already been stated that there was no measurement of the land except in the case of one village, Kosa, and it is a little difficult to say how the assessments were arrived at. An enumeration was made of the cattle, but it does not appear that the revenue was settled by that means any more than by the estimate of the cultivation which also appears to have been made. Sir H. Ramsay in his review says "the revenue may be almost strictly called a poll-tax." Probably Mr. Beckett like Mr. Batten assessed on the trading prosperity of the village. Then the Government demand having been arrived at, the cesses, etc., were added and the total sum divided among the co-sharers, partly with reference to the amount of land they held, and partly with reference to the cattle. In villages in which cattle were not numerous, the assessment purported to be wholly on the land, so that it seems very improbable that the revenue was arrived at by counting up the cattle. At this settlement also the customary dues payable by the *gánth* villages in the Máná pass, as elsewhere, were commuted to a fixed cash payment and Rs. 408 assessed on them. The revenue assessed by Mr. Beckett on three villages Niti, Margaon and Máná, has been reduced since last settlement, on the ground of loss of live stock; though with the exception of Niti and Máná every village shews a considerable increase in live stock since last settlement.

Present condition of the tract.

116. At the present settlement the Bhotiyás claimed a reduction of revenue, mainly on two grounds: (1) that their trade had decreased, (2) that they ought not to be taxed on their cattle as they pay grazing dues to the Forest Department when they journey to the foot of the hills. To consider the second objection first, the only Bhotiyá cattle which pay dues in the Bhábar are the sheep and goats, which pay six pies per head. During 1894-95 it appears that grazing dues were thus paid at Rám Nagar and Kotdwára on account of between 9,500 and 10,000 sheep and goats of the Niti and Máná passes, the sum paid being about Rs. 300. This agrees very closely with the statistics of the total number of sheep and goats possessed by the Bhotiyás. It is evident therefore that these people now pay a considerable sum as grazing dues from which they were exempt at the time of last settlement. It is obviously easier to reduce the assessment of Malla Painkhanda than to allow free grazing to a certain community at Kotdwára, and to this extent the demands of the Bhotiyás are reasonable.

As regards the decrease of trade it appears that the Tibetan Government has within the last eight or ten years reduced the dues payable by the Bhotiyás, though whether in consideration of hard times or not it is impossible to say. The former

customary due of the tenth sheep load has in the Niti pass been reduced to two sheep loads for each trader on the first journey in the year and one on each succeeding journey. No land revenue is now paid by villages in the Niti pass. In the Mána pass the old and heavier dues are said to continue in force. Mana pays Rs. 44 as land revenue and the load of each tenth sheep. The same used to be paid by Pandukeshwar, but as very few people from that village now trade, the land revenue has been reduced to Rs. 25. The only statistics regarding the trade are those which have been collected at the registration posts in each pass for the last ten or twelve years. From these it appears that the Tibetan trade is not declining at present, and there is no reason for supposing that it has declined within the last thirty years. It is probable, however, that dearness of grain has had the effect of cutting down the Bhotiyás' profits very considerably. Trade may have extended, but at the same time profits have almost certainly decreased.

The assessments in the Niti pass.

117. On the general grounds that a tax on trade was undesirable, and particularly so in the case of the Tibetan trade, which affords employment to thousands in the most sterile part of Garhwál, and provides a market for produce in the same region, thus encouraging agriculture, which without this stimulus would inevitably languish; and that with the enhancement of land revenue of the whole district at the present settlement limited to fifty per cent., there was no necessity for taxing the trade of the Bhotiyás, it was decided to make the assessment only on the third and fourth items of the old list, as had been done by Mr. Traill, *viz.*—

Produce of agriculture.

Produce of jungles.

The latter, consisting originally of a royalty on wild roots and drugs, was made to take the form of consolidated grazing dues on the excess of cattle in any village over the number necessary for cultivation. In villages outside Painkbanda, the excess of cattle had in fact been taken into account in fixing the revenue at last settlement. (*Vide* § 25). The assessment of the first item was made by applying rough revenue rates to the estimated cultivated area of the village. The rates were:—

Re. 1-0-0	<i>per bisí</i>	of irrigated land.
„ 0-8-0	ditto	dry do.
„ 0-4-0	ditto	<i>katil</i> do.

The land revenue payable thus was calculated out, and the assessment roughly determined, which might or might not be the same as that obtained by the calculation. When the reduction of revenue would be very large a higher figure was frequently fixed; also if the land appeared to be better than usual.

After the land revenue proper had been fixed, the assessment, if any, on account of the consolidated grazing dues was settled. It was assumed for this purpose that—

8 sheep or goats = 1 *jábá*, yak, horse or buffalo.

4 sheep or goats = 1 cow, ox or ass.

It was also assumed that for the cultivation of land paying Re. 1 of revenue five oxen or their equivalent in other animals were necessary. This allowance of five oxen or the equivalent in other cattle constitutes the free allowance for each village; any thing over and above this was calculated for the purpose of grazing dues at the rate of—

40 sheep or goats	} per rupee.
10 cows, oxen or asses	
5 <i>jábás</i> , yaks, horses or buffaloes	

Here again, as in the case of the agricultural assessment, the actual calculated result was not always taken. When the number of cattle was very much in excess, a deduction was allowed on account of the unstable character of the assets. Where there was reason to believe that the whole number of cattle had not been returned, the demand for consolidated grazing dues was fixed at something above the calculated assessment. It must be remembered that the sum is assessed on the *excess* of cattle only, not on the whole number. The assessment on this account in the Niti pass amounts to only Rs. 162 out of a total of Rs. 593.

It will be observed that in the case of Malla Painkhanda, the plan followed in the other non-cadastrally surveyed pattis, of fixing the demand for the patti and allowing the padhans to divide it amongst themselves was abandoned. The reason of this was that as some villages required enhancement and others a reduction of revenue, the *mál-guzárs* could not be trusted to divide a sum involving a total reduction themselves. Each would have demanded a portion of the reduction as his share and right, and the intended revision would have proved nugatory.

The assessment of the Máná pass.

118. The assessment on the Máná pass was made on somewhat different principles. The people here are ordinary Hindus, except in Máná which is peopled by *Márchas*. The cultivation is very straggling and difficult to estimate. In Máná village on account of the cattle not having come up from the lower hills no accurate census could be made in time. All the villages in the pass are *gúnth*; the revenue previously to last settlement used to be liquidated chiefly by carrying grain to the temple from the lower parganas. A good deal of the revenue is liquidated in this way now, only the cash earned is given to the temple instead of the direct service. The Pandukeshwar people make use of their land to build shops, which are let out at exorbitant rates to dealers, as much as Rs. 80 a year being paid; while the Máná people make a large income out of the supply of firewood at Badrináth. The pilgrimage is a source of profits in other ways also. On all these grounds it was thought desirable to regulate the assessment in the Máná pass (there are only four villages) with regard to the expiring demand, rather than try to make any elaborate calculations. The Máná people could not pay their revenue. Their trade is stationary, if not declining; they are all heavily in debt, and their stock of cattle has decreased. They were given a substantial reduction in revenue. Khiraun, a declining village was also allowed a reduction. In the other two the former assessment was maintained. The sum assessed on this pass was Rs. 269 making a total of Rs. 852 for the patti, a reduction of Rs. 333 on the former assessment, an amount equal to the enhancement levied on Talla Painkhanda.

Patti maps of the non-cadastrally surveyed part.

119. There were prepared at the same time that the assessment of the non-cadastrally surveyed pattis was made, maps shewing the position of every village in each patti. There were no extant maps shewing this, and the absence hitherto of any map of this sort has been one of the difficulties of the hill districts. The patti maps prepared by the Survey Department for the cadastrally surveyed pattis have been one of the most valuable results of the recent survey, and an endeavour has been made in much humbler fashion to provide an index map of the position of villages in the non-cadastrally surveyed part. At the time of inspection the position of the cultivation and homesteads of each village were roughly noted on a copy of the Great Trigonometrical survey maps, which give the position of all rivers and ravines and of almost all inhabited villages, so that the possible margin of error is narrowed down very considerably. The details so gathered were afterwards plotted in on a map copied from the Great Trigonometrical survey maps on the scale of one inch to the mile. The position and extent of the cultivation of each village is approximately shewn, though, cultivation being always more or less interspersed with waste, and as even considerable pieces of waste cannot be shewn on a map of this scale, the actual area under cultivation cannot be gauged from these maps.

Assessment of unsurveyed fee simple villages.

120. Fee-simple estates whose proprietors availed themselves of the opportunity of having their lands surveyed at their own cost, were assessed for cesses in the same way as other villages by means of circle rates. Those estates which were not surveyed in this manner were summarily assessed in a similar fashion to villages in the non-cadastrally surveyed part. Generally where the estate was entirely forest and waste, the old demand was retained. In the others, the assessment was roughly made on the area under tea and crops as shewn by the returns and from inspection. A list of fee-simple villages is attached to this report as Appendix X showing how each estate was dealt with.

Graduated assessments.

121. Under the orders of the Board, conveyed in the review of the *Bárahásyún* assessments, graduated assessments were to be allowed only in cases where the enhance-

ment is more than 100 per cent. and the new assessment exceeds the old by not less than Rs. 25. In these cases 100 per cent. was to be taken at once; another 50 per cent. from the beginning of the fourth year, and the remainder, if any, from the beginning of the seventh year. This rule was not extended to outlying hamlets, or *laggas*, though held under a separate engagement from the parent village, when both were owned by the same proprietors, unless the enhancement on both combined exceeded 100 per cent. Nor was it extended to the case of villages in which the excessive enhancement was due merely to the transfer of land from one village to another. No progressive assessment was as a rule, allowed in cases where the enhancement exceeded 100 per cent. by one or two rupees only, and in the case of a similar excess over 150 per cent. no intermediate stage was allowed, as also in cases where the total enhancement did not exceed Rs. 30. And in cases where the difference between the intermediate and final stages would be very great if calculated strictly by the above rule, the initial and intermediate demands were arranged so as to take at least one-third of the total enhancement in the first stage and at least one-half of the remainder in the second, thus leaving a sum not greater than one-third of the total enhancement to be added for the final stage. Details of the progressive assessments proposed were submitted to the Board with the pargana assessment reports, and were in every case sanctioned without modification. A list of the villages, incorporating alterations due to reductions on appeal and from other causes, is attached as Appendix VIII to this report. By parganas the numbers are shewn in the following statement:—

Pargana.	Number of villages.	Expiring demand.		Initial. First 3 years.		Intermediate. Second 3 years.		Final.	
		Rs.	a. p.	Rs.	a. p.	Rs.	a. p.	Rs.	a. p.
Bárahayón	36	1,093	8 0	2,187	0 0	2,530	0 0	2,663	0 0
Chaundkot	4	143	0 0	286	0 0	315	0 0	315	0 0
Malla Salán	30	873	0 0	1,744	0 0	2,007	0 0	2,097	0 0
Talla Salán	32	738	8 0	1,535	0 0	1,803	0 0	1,843	0 0
Gauga Salán	27	698	0 0	1,417	0 0	1,686	0 0	1,730	0 0
Devalgarh	18	464	0 0	936	0 0	1,109	0 0	1,134	0 0
Chánpur	19	387	0 0	818	0 0	1,034	0 0	1,125	0 0
Badhán, cadastrally surveyed	5	33	0 0	102	0 0	152	0 0	181	0 0
Nágpur ditto	6	195	0 0	390	0 0	443	0 0	443	0 0
Dasauli, non-cadastrally surveyed	2	44	0 0	90	0 0	110	0 0	110	0 0
Total	179	4,669	0 0	9,505	0 0	11,198	0 0	11,650	0 0

The small number of villages (two in all) in the non-cadastrally surveyed patts is due to the fact that with no figures to back the assessments it was impossible to treble or quadruple the revenue of a village as had been frequently found necessary in the cadastrally surveyed patts, even when it was certain that they had developed to this extent. The comparatively large difference between the expiring demand and the initial new demand is due to the fact that the latter was necessarily by the rule at least twice as much as the former, while the comparatively small difference between the initial and intermediate stages, is due to the fact that in many villages, the final differed from the initial demand by only a few rupees. The effect of these progressive assessments is to remit Rs. 2,145 a year for three years and Rs. 452 a year for three years more—in all Rs. 7,791.

122. The Garhwál Bhábar differs in so many respects from the hills that although scattered allusions have been made to it throughout the earlier part of this report, it has been deemed advisable to collect here in one place all matters relating to its assessment.

The Bhábar.

The Garhwál Bhábar consists of a narrow strip of country below the foot of the hills, extending from the Ganges to the boundary of Kumaun, a distance of about fifty-eight miles, and bounded on the south by the Bijnor district from which it is separated by the submontane road. The average width of the tract is less than a mile though at one point near Kotdwára it broadens out to about two miles in width.

There appears to have been no cultivation in any part of this tract at the time of the British occupation in 1815 A.D. There is little doubt, however, that some part at

least was cultivated in the time of Garhwál Rájás. At Mawákot there are the remains of a fort and some tanks, and one Jagdeo is said to have had an indigo factory here. From the earliest times, however, the chief value of this strip of land and the adjacent hill sides appears to have lain in their forests and grazing grounds. The right to fell timber and cut bamboos was leased out annually from the beginning of the British rule. Similarly a grazing tax was imposed on cattle, in the first instance only on cattle from the plains, but in 1822 A.D. extended to hill cattle. The right to collect these dues was leased out in the same manner as the right to cut timber and bamboos. In 1820 cultivation was begun at Mawákot and about 1823 (the *assi sál*) in Dharon, Jhirna and Kothirau. The three latter villages were *laggas* of Sirakírau in the Pátli Dún, a large and old established village. In 1896 Samvat, at Mr. Batten's settlement, the whole of the Pátli Dún cultivation was settled with Padam Singh, Negi, for Rs. 275. This man had hitherto been a mere lessee or contractor for the Pátli Dún cultivation, being entitled to collect the rents of the land just as he was entitled to collect the grazing and forest dues which he also farmed for the sum of Rs. 2,750 annually, or ten times the sum paid for the cultivation. Mr. Batten, however, allowed him a proprietary right in the cultivation. This included at that time, a few acres at Lakrighát on the Rám-ganga opposite Kálagarh. In 1849 A.D. the collection of dues from the Bhábar Forests, was handed over to the Collector of Bijnor. Between 1824 A.D. and 1826 A.D. they had been in the same way under the control of the Collector of Moradabad. In 1853 Padam Singh's right to collect the forest dues in the Pátli Dún for the remainder of the term of settlement was purchased by Government for Rs. 15,000 and the forests were taken under direct management and transferred from Bijnor to Garhwál. The remainder of the Bhábar (west of the Khob) remained under Bijnor till 1866 A.D. when it again reverted to Garhwál. At last settlement it was finally decided under Sir H. Ramsay's advice to put a stop to cultivation in the Pátli Dún and Padam Singh was given several villages in Bijnor instead. The three villages of Jhirna, Kothirau and Dharon, however, as being outside the hills were allowed to remain under cultivation and are still held by the descendants of Padam Singh. The Lakrighát cultivation appears by this time to have been abandoned as there is no mention of it in the last settlement papers. The continuation of cultivation in Mawákot seems to have been permitted for the same reasons as in Jhirna, etc. The old papers regarding the village are not traceable. The present family of proprietors are said to have come by the village by its being granted to their ancestor Sís Ram, *thánadár* of Haldwáni by Sir Henry Ramsay in 1854 A.D. Since 1869 a number of villages owned by Government, held under direct management have sprung up round Mawákot, in the only part of the Bhábar which possesses any considerable width, and one village of the same kind near Jhirna. There is also a revenue free grant named Ghosikháta, made in 1888 A.D. to Subadár Major Balbhadra Singh and hence also called after him Balbhadrapur.

The Bhábar cultivation.

123. It will be seen from the above account that existing cultivation is divided roughly speaking into two parts. In the extreme east on the borders of Kumaun are the remnants of the old Pátli Dún *laggas* along with one Government village. On the west centre are the majority of the Bhábar villages, for the most part held under direct management. The interval between the two blocks of cultivation is about twenty-six miles of horizontal distance. The eastern villages are themselves separated one from the other by intervals of two or three miles except the two Jhirnas which adjoin. The whole of the Bhábar east of Saneh, the most easterly point of the western cultivation, is included in the forest reserves, within which the existing villages are merely demarcated *chaks*. This fact militates against the successful cultivation of these villages. This part of the Garhwál Bhábar seldom exceeds half a mile in width and is usually much less, the land to the south being in the Bijnor district. West of Saneh, broadly speaking the boundary of the reserved forest follows the foot of the hills—the hills being under the control of the Forest Department and the level land or Bhábar being under the control of the District Officer. This arrangement continues as far as the Pápidánda tract about fifteen miles from Saneh. Beyond this the whole country is reserved forest and there is no cultivation whatever.

The soil of the Bhábar villages is usually a light loam, in places even sandy. This is particularly the case in the land near the hills. The streams in the rains bring down a great deal of sand from the hills which back the Bhábar. The water containing the sand either flows on to the land or is led thither by the canals, and in either case is absorbed and the sand deposited. In cultivated land, surface drainage is generally insignificant and the deposit of sand is due chiefly to the canals.

Soil.

In the eastern villages irrigation is scanty and is usually carried on as in the hills by simple excavated channels from the streams (*sot*) on the banks of which the village is situated. It is a characteristic of the Bhábar that water is only to be found in these streams within the hills or shortly after they issue therefrom. Lower down the bed of the stream all the water is absorbed in the sand and boulders. Canals are therefore taken off at the point where the streams leave the hills. The western villages are irrigated from the masonry lined channels of the Government estate. The Balbhadrapur grant is irrigated from the western Khoh canal, the water in which supplemented as it is by the Sukhrau stream is generally sufficient to irrigate the entire area which it is required to serve. Mawákot on the other hand is irrigated from the eastern Málán canal. Here owing to the usual deficiency of water in the river, and the fact that one-third of the total supply has to be passed down to Bijnor, the water supply is insufficient to irrigate the whole area. Mawákot gets a particularly small supply of this water, but during the rains and early autumn a stream called the Jagdeo Sot issuing from the hills above Mawákot is used to supplement the supply from the Málán canal.

Irrigation.

In the western villages the proprietors manage their estates themselves, cultivating some of the land directly and letting the rest out in holdings to tenants. In the eastern villages the proprietors lease out the whole village to one man, who in his turn sublets the holdings. The lessee is usually a Kumauni cattle owner, who builds a cattle station on the land, encourages his friends to do the same, and by thus enriching the soil, induces the professional gardeners of the *sáni* caste and others of Bijnor district, to take holdings for the cultivation of tobacco, cotton, etc. Except in Balbhadrapur, which is cultivated for the most part by Garhwális from the hills, almost all the tenants are plains men.

Cultivators.

In the western villages, rice, wheat and mustard are the prevailing crops. In the eastern, rice is hardly grown at all, owing to the absence of irrigation and the favourite crops are tobacco and cotton (*Vide* §§ 18 and 19).

Products.

Excluding Balbhadrapur, cultivation had increased from 172·6 acres to 239·0 acres, or 38 per cent., the greater part of which was, however, unirrigated land; the irrigated increase being only from 118·8 acres to 137·3, or about 15 per cent. The assessable area was also increased by 33 acres of new fallow which was non-existent or unmeasured at last settlement, making a total increase in the assessable area of 57 per cent.

Increase in cultivation area.

124. The *khánapuri* of the settled villages of the Bhábar was carried out along with the proceedings for the revision of rents in the villages of the Government estate during 1894-95, and at the same time the soils were roughly classified into the classes used for that revision. The attestation of these villages was overlooked by the Settlement Deputy Collector, as the *khánapuri* had been by the Survey Department and this work had to be taken up by me at the time of assessment. There being, however, no occupancy holdings and each village being owned by one proprietor, there were no disputes as to tenures or ownership and the attestation was an exceedingly simple matter. At the time of inspection also the classification of soils was revised throughout, the following being adopted as assessable :—

Assessment.

Irrigated	{ 1st class.
	{ 2nd "
Dry	{ 1st "
	{ 2nd "
	{ 3rd "

Except for this classification of soils, the method of assessment adopted was according to the settlement rules. Villages were classed into circles, and revenue rates, checked by produce statements, applied to the different classes of soil.

Assessment circles.

As regards assessment circles, the eastern villages differ so obviously as regards products from the western and are separated by so great an interval of space that it was thought proper to put them in a separate circle. Mawákot again with its deficient water-supply could not be put in the same class as Balbhadrapur. There are thus three circles for the five villages.

Revenue rates.

The accepted revenue rates were as follows :—

	Jhirná.			Mawákot.			Balbhadrapur.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1st class irrigated	0	3	0	0	3	0	0	4	0
2nd „ ditto	0	2	0	0	2	0	0	3	0
1st class dry	0	2	0	...	...	...	...	...	...
2nd „ „	0	1	6	...	...	...	...	...	...
3rd „ „	0	1	0	...	...	...	...	...	...

The rates are per *bighá* of cultivation the Bhábar *bighá* measuring 756½ square yards, and 6½ *bighás* making one acre. The rates in Mawákot and Balbhadrapur were founded on the rents actually paid in these villages. These are, however, regulated not by competition but by the rates paid by tenants in adjoining villages of the Government estate. These were, till the recent revision, Rs.0-3-0 for double cropped land and Rs. 0-6-0 for single cropped; of which the Balbhadrapur rates are exactly one-half. In Mawákot owing to deficiency of water only three crops are grown in two years and the average rate on the best land is therefore only Rs. 0-7-0. Even parts of this fall fallow occasionally for want of water, and so Rs. 0-3-0 instead of Rs. 0-3-6 probably represents more nearly half the average rental. In other land one year's fallow in three was estimated, and Rs. 0-2-0 taken as the rate. As at *khánapurí* nearly 15 acres out of 51 under this class were found fallow, this allowance is fairly correct. In the eastern villages the rents paid by the sub-tenants are merely crop rents, and as the cultivation is of a most unstable character, no reliance was placed on these for forming circle rates. As much as Re. 1 a *bighá* is sometimes realized as rent from tobacco land. But the same land may after one or two years' cropping be left waste for long time. The rents paid by the lessees to the proprietor are the only rents of any stability, and, as remarked by the Commissioner, they are not true rents. Accordingly these villages were assessed on revenue rates deduced from those assessed on Mawákot and similar land in the hills.

Orders on the assessments.

On review of the assessments the Board decided that the revenue of these villages should have been fixed with regard to the actual assets as deduced from the rents paid by subtenants, and as these justified a higher revenue the sums proposed were raised accordingly. The new demand, as finally sanctioned, excluding the nominal assessment on Balbhadrapur, amounted to Rs. 280, as against Rs. 179 of the expiring demand, an enhancement of Rs. 101, or 56 per cent. The nominal assessment on Balbhadrapur was Rs. 362. As compared with the sum assessed at last settlement, Rs. 210, which was reduced on account of diluvion in 1889 and 1890, the enhancement amounts to 33 per cent.

Orders on the assessments.

125. The assessments were completed and the assessment reports despatched on the following dates :—

Bárahjún ... ..	...	...	...	...	8th September 1893.
Chaundkot ... ..	...	...	...	...	13th April 1894.
Malla Salán ... ..	...	...	...	...	16th December 1894.
Talla Salán ... ..	...	...	...	...	13th February 1895.
Ganga Salán ... ..	...	...	...	...	15th March 1895.
Dewalgarh ... ..	...	...	...	...	19th April 1895.
Chánpur ... ..	...	...	...	...	15th July 1895.
Badhán (cadastrally surveyed) ... ..	...	...	...	...	27th July 1895.
Non-cadastrally surveyed pattis east of the Alaknanda ... ..	...	...	...	...	3rd August 1895.
Non-cadastrally surveyed pattis of Nágpur ... ..	...	...	...	...	28th October 1895.
Cadastrally surveyed pattis of Nágpur ... ..	...	...	...	...	4th November 1895.
Bhábar ... ..	...	...	...	...	13th December 1895.

The orders passed on the assessments in the Bhábar have been noted in the last section. In the hill villages the assessments proposed were, with the exception of Chaundkot, confirmed without alteration. In Chaundkot pargana, in which an increase of 63

per cent. was proposed, the Board decided that this amount was too large a share of the enhancement as determined for the whole district. But even here the revision of the assessments of the various maháls was left to the Settlement Officer, he being directed merely to bring down the enhancement to between 50 and 55 per cent. by reducing the revenue in these villages in which over classification of soil had been most excessive. The principle to be adopted was that already noted in § 101, *viz.*, to value at the rates for first class dry, only the area for which first class crops were recorded, and to treat as second class dry the area for which second class crops were recorded. The enhancement was in this manner reduced to 55 per cent. and the declaration of the assessments authorized. In all parganas except Báráhsyún and Chaundkot the assessments were also approved by Government before being announced. The revised assessments came into force with the next instalments after their announcement. The term of last settlement for Báráhsyún, Chaundkot, Cháandpur, Malla Salán and Talla Salán expired on the 30th June 1892, and for the rest of the district on the 30th June 1893, but by Government Order No. $\frac{1}{I-556A}$ dated the 4th January 1892, the old assessments remained in force till the revised demand was declared. The new assessments have been brought into force as follows:—

Báráhsyún	...	...	...	<i>Kharif</i>	instalment 1893.
Chaundkot	...	...	...	<i>Do.</i>	do. 1894.
Rest of the district	...	...	...	<i>Rabi</i>	do. 1896.

In accordance with the orders of the Board, passed on review of the Báráhsyún assessments, the engagements have in every case been taken for twenty years from the instalment with which they came into force, subject to such orders as Government may eventually be pleased to pass regarding the term of settlement.

126. Owing to the minute state of sub-division of property in land, almost every village being owned by a village community even when these do not constitute the actual cultivators, there are few maháls in which it was not found necessary to distribute the assessment. In the cadastrally surveyed patts this was purely a mechanical operation, the number of *zarb bisís* in the village being divided into the amount of the assessment and a rate obtained according to which each holding was assessed by the number of *zarb bisís* and fractions which it contained. For *kháekars* the revenue was calculated out in the same way, being increased by 20 per cent. on account of proprietors' dues. This application of the *zarb bisí* to distribute the assessment appears to have been one of its principal uses at the last settlement. The Bhábar villages, the only ones of the cadastrally surveyed part in which the *zarb bisí* was not used, required no distribution.

Distribution of the assessments.

In the non-castrally surveyed patts the distribution was a more difficult matter. Here owing to new cultivation no one but the cultivators themselves knew what amount of land constituted the holding of each, and as the division is invariably made according to the actual holding of each man, the distribution according to the nominal share of each in the estate having been done away with at last settlement, and the amount of the nominal share being consequently now absolutely impossible of ascertainment, even if existent, no distribution by state agency was feasible. Accordingly as soon as the demand for each village was settled at the general *puncháyat* of the patti, each *málguzár* was given the revised "*skeleton phánt*" of his village with the new revenue filled in, and they were told to settle the amount of *revenue* due from each co-sharer and *kháekur* in village council (leaving calculations of rent and cesses to be done in the settlement office) and to return the *phánt* through the *patwári* in two months. In some cases the distribution was with difficulty effected in twelve, and though the signature or mark of each man was required to be affixed opposite his name in token of his assent to the share assigned to him, it would appear that in many cases the *málguzárs* carried out the distribution themselves, alone and unaided. There were of course many objections to the division made, all of which I took up myself, which usually had to be settled by a local enquiry, or in some cases by a rough measurement of holdings, made by the *patwári*. These objections were, in Garhwál however, to be expect-

ed in any case. They have been made in the cadastrally surveyed pattis and even, notwithstanding the purely mechanical nature of the distribution, taken up to the Commissioner in appeal.

Comparison of former
and present system of
measurement.

127. Before proceeding to discuss the increase in cultivated area during the period of settlement, it is necessary to enquire somewhat into the accuracy of the statistics. That the areas returned as cultivated at last settlement were far from accurate, no one will now dispute. As long ago as 1891, Col. Erskine had spoken of Mr. Beckett's much admired measurement as the "miserably inaccurate and incomplete *nazari* survey." Col. Sandeman in 1890 found that villages in Bárahsyún in which there was said to be no new cultivation shewed increases in area of seventy or eighty per cent. It is not possible that the increase in cultivated area from 163 to 368 square miles, or 125 per cent., is entirely real. In 1893 an endeavour was made to ascertain the actual increase in cultivation during the term of settlement. The maps of twenty villages were taken at random, and the areas of fields measured at last survey which have again been measured at the present survey compared. The percentages of increase shewn by the totals of these fields in each village, varied from 2.76 to 135.87 per cent., and worked out as a whole for the twenty villages at 47.82. The same differences were found in the case of individual fields. The areas of some fields as now recorded agreed exactly with the areas recorded at last settlement; while in other cases they had increased by more than fifty per cent. It was therefore supposed that many fields at last settlement had not been measured at all, but simply credited with the measure of seed said to be commonly sown therein. Of course a good deal of this difference might be due to extensions of fields into adjoining waste since last settlement, and in any case, the difference might be due to errors in either survey. But there is not wanting external evidence that Mr. Beckett's measurement was deficient. Numerous instances have come to light at the present settlement, where the increase in cultivation and revenue compared with the increase of population and the revenue assessed at Mr. Batten's settlement were only to be explained by short measurement in 1862. To take a few instances from one patti, Malla Sila. Muhara Malla in 1840 had a nominal area of 15 *bisis*, and was assessed to Rs. 18 revenue. At last settlement the area came to slightly less than 15 *bisis* and Mr. Beckett thinking the old revenue too much for this area, compared with his standard rate and the assessment on other villages, reduced it to Rs. 14. But at the present settlement the area comes to 48 *bisis*, while the number of cultivators remains almost the same as before. Mr. Batten assessing on the basis of the previous demand arrived at a fair revenue in spite of the inaccuracy of his nominal area. But Mr. Beckett appears to have been misled by his area statement into reducing the revenue. Gwárigaon is another case. The nominal area in 1840 was 22 *bisis*; last settlement only 18 were measured and the revenue reduced from Rs. 25 to Rs. 21. The present area is 40 *bisis*. Rwíni Malli, Páikot, Lwíntha, Jaryáná Talla, Jaletha, Goyún and Dábari in the same patti are all instances of the same sort. These are extreme and probably fraudulent cases, but by no means uncommon. There would also no doubt be a mechanical error incident to the system. Fields in Garhwál are usually long narrow strips. Where the width was $3\frac{1}{2}$ yards, the *amin* to make even figures put down three, an error of 15 per cent.—small in any given field, but serious in its cumulative result. On the other hand, I am afraid it must be admitted that the present survey leans towards excessive measurement. Section 27 of the survey rules indicates one way in which this happens. Terrace walls not exceeding 8 links in width are, when they lie wholly within one field, *deducted* from its area, by multiplying the length of the wall by 5 links, this being assumed as the average width. But where a terrace wall separates two fields, its area is *divided* between the two. That is to say all such terrace walls appear in the measurements as cultivated land. The magnitude of this error may be gauged by the fact, that out of about 500 square miles of assessable area and old fallow, 28 square miles were deducted for interior terraces, or say 5 per cent. Now terraces between fields are the rule, and interior terraces the exception, so that it is safe to assume the former are

twice as extensive as the latter, that is to say, the error due from their inclusion in the cultivation must be at least 10 per cent. Again the system of chaining up and down steep hillsides is admittedly very liable to error. To take an extreme case, a man chaining down a hillside with a slope of 45° will chain 141 feet for every 100 of horizontal distance. If the angle is only 30° which may be taken as the normal for cultivated lands in the hills, he still measures 115 feet instead of 100, and to the extent of 15 per cent. his area will be excessive. Of course the *amin* ought to have checked his measurements by the calculated distance between the theodolite stations, but there can be little doubt that at least in the case of isolated patches of cultivation they did nothing of the kind. The Commissioner, Col. Grigg, made a number of measurements in Chaundkot and found the present survey areas uniformly excessive, the average being nearly 26 per cent., due not improbably to both the above causes. I am not endeavouring to disparage the present survey. A uniform difference in measurement of this description in no way affects the value of the record of rights, and only to a very slight extent the value of the measurements as the basis of assessment. The differences are only mentioned to shew that any comparison, based on existing statistics, of the cultivated area at the last and at the present settlement, must be to a great extent fallacious. Throughout the present settlement it has been generally assumed, for purposes of the calculation of assessments, that the difference between the two systems of measurement amounted to 40 per cent., *i. e.*, that if at last settlement the present system of measurement had been used, every 100 acres would have increased to 140; and accordingly, before comparing the statistics of cultivated area on the last and present settlement, it was usual to add 40 per cent. to the former. But that this allowance is excessive is I think proved by the case of Chauthán. The statistics shew 2,176 acres of former assessable area and 3,459 at present. Adding 40 per cent. to the former, the total is 3,046 acres, leaving an increase of 413 acres or 13 per cent. only. Considering the large extensions of cultivation at the head of the Binau valley, this is an impossibly small amount. Applying the same rule to individual villages in the patti many would be found to have actually decreased in area. If I may venture to give a personal opinion, it is that the differential factor between the former and present system of measurement does not exceed 30 per cent., and that to arrive at just results this should be divided between the two sets of statistics, about 15 per cent. being added to the old settlement areas and 15 per cent. deducted from the present. However in the following sections in comparing the statistics the 40 per cent. hitherto adopted will be retained, and the difference adjusted by adding the amount to the last settlement areas.

128. The increase in total surveyed area is from 232 square miles to 952 or over 300 per cent. This however is a purely nominal difference. At last settlement the measurement was confined to cultivated and culturable land; the present survey included large areas of waste and forest land. Moreover at the present settlement, there was no survey whatever of the northern patts. So it will be as well to confine comparisons to the assessable area, consisting of cultivation and new fallow. The actual statistics are as follows in square miles :—

Comparison of the former and present settlement statistics of areas.

Particulars.	Cadastrally surveyed. Sq. miles.	Non-cadastrally surveyed. Sq. miles.	Total. Sq. miles.
Last settlement	182.5	25.6	208.1
Present settlement	405.8	38.4	444.2
Percentage of increase	122.3	50.0	113.4

Adding, however, 40 per cent. to the old area of the cadastrally surveyed parts the increase is reduced to 59 per cent., and that of the whole district to 58. It will be remembered that the present settlement areas for the non-cadastrally surveyed parts are

only estimated, and non-cadastrally surveyed fee simple villages are entirely excluded. The assessable area probably gives most accurately the area of ordinary cultivation, but if the areas actually found under cultivation in the year of survey are taken, the figures work out as under :—

Particulars.					Cadastrally surveyed. Sq. miles.	Non-cadastrally surveyed. Sq. miles.	Total. Sq. miles.
Last settlement	...	...	...	...	163·3	24·0	187·3
Present settlement	...	...	...	...	368·0	38·4	406·4
Percentage of increase	...	...	...	...	125·3	59·7	116·8

If 40 per cent. is added to the last settlement area of the cadastrally surveyed parts, the increase is reduced to 61 per cent., and that for the whole district is approximately the same. Of this the irrigated area amounts to only 13 square miles, as against 5 at last settlement; but almost all of this lies in the cadastrally surveyed portion, and much is only nominally irrigated (*vide* § 98). Any comparison of increase in the different classes of soil would be valueless, as the *amins* had in view a somewhat different standard of first and second class dry to that which prevailed at last settlement. The nominal increase under first class dry is 134·73 per cent. and under second class dry 90·50 per cent. whereas it is obvious that had the standard been the same as at last settlement, the figures would have been the other way about. The present proportion to the total cultivated area, of each class of land is as follows :—

Description					Cadastrally surveyed.	Non-cadastrally surveyed.	Total.
Irrigated	...	...	...	...	3·37	2·18	3·25
1st class dry	...	...	...	...	43·11	26·05	41·50
2nd class	...	...	...	...	49·81	71·33	61·85
<i>Katil</i>	...	...	...	...	3·71	·44	3·40
Total					100	100	100

It will be interesting to compare the calculated increase in cultivation in each *pargana* with the percentage of enhancement on the revenue demand. The following table shows this :—

Pargana.	Former area, square miles		Present area. Sq. miles.	Percentage of increase.	Percentage of enhancement.	Present incidence per acre.
	Actual.	With 40 per cent. added.				
Badhán (surveyed)	5·7	7·9	12·2	51 ² / ₁₀	47 ² / ₁₀	0 12 4
Bárahayón	34·5	48·3	68·6	42 ² / ₁₀	60 ² / ₁₀	0 10 4
Chándpur	18·2	25·4	37·5	47 ² / ₁₀	50 ² / ₁₀	0 10 7
Chaundkot	15·1	21·1	31·3	48 ² / ₁₀	52 ² / ₁₀	0 9 1
Dewalgarh	13·5	18·0	31·0	04 ² / ₁₀	60 ² / ₁₀	0 11 1
Ganga Salán	27·1	37·9	73·9	95 ² / ₁₀	54 ² / ₁₀	0 7 4
Malla Salán	19·8	27·7	43·0	55 ² / ₁₀	54 ² / ₁₀	0 10 8
Nágpur	8·9	12·4	17·9	41 ² / ₁₀	48 ² / ₁₀	0 11 7
Tallu Salán	20·2	28·2	52·5	86 ² / ₁₀	64 ² / ₁₀	0 9 0
Jadhán (unsurveyed)	5·2	...	7·8	50 ² / ₁₀	31 ² / ₁₀	0 15 7
Dasauli (ditto)	5·3	...	9·0	70 ² / ₁₀	41 ² / ₁₀	0 13 6
Nágpur (ditto)	11·1	...	17·0	53 ² / ₁₀	38 ² / ₁₀	0 15 1
Painkhanda (ditto)	Not surveyed.	...	4·5	...	...	0 14 0

129. Appendix I. A. shews the areas of the cadastrally surveyed portion of the district initially returned by the Survey Department. It will be noticed that the total area surveyed is there returned as some 500 acres more than in Appendix I. This is partly due to land at first surveyed being afterwards entirely excluded from village areas; for instance nearly 70 acres were thus excluded from Jola in Pindarwár, being found to be within the (unsurveyed) estate of Gwáldam; again nearly 12 acres surveyed were found to be within reserved forests in the south of the district and excluded from village areas. But it is chiefly due to areas having been at first incorrectly extracted from the maps, and subsequently altered on the authority of correction slips received from the Survey Department. Such emendations were numerous. Besides the large number which involved an alteration in the total area, a still more considerable mass required a transfer from one class of land to another, *e.g.*, from cultivated to waste or *vice versa*. The shifting of a decimal point had sometimes caused fields to be entered at ten or one hundred times their correct area, others, usually among the large patches of waste, being correspondingly reduced in size. In many villages the alterations in the assessable area due to this and similar causes were so considerable as to necessitate an alteration in the assessment after report to the Board, as will be presently explained. It is especially noteworthy that the cultivated area as now ascertained is less by over 2,000 acres than that initially returned. A small portion of this is due to land struck off the cultivated area subsequent to survey as the result of the Gauna flood. These areas are:—

Alterations in classification of soils made during settlement.

Pargana.	Reduced to new fallow second class dry. Acres.	Reduced to non-assessable area. Acres.	Total. Acres.
Bárahayún ... ..	...	17.5	17.5
Dewalgarh ... ..	...	97.0	97.0
Nágpur	22.0	127.7	149.7
Total	22.0	242.2	264.2

Except for these causes the differences in classification are slight, for the reasons already mentioned, the only noticeable case being that of pargana Nágpur where the area under first class dry was reduced by about ten per cent. by transfer to second class.

130. Appendix III, shows, patti by patti, the crops on the ground at the time of survey. This statement it is almost unnecessary to explain does not extend to the unsurveyed portion of the district. The corresponding figures for last settlement cannot be given, as only the crop found actually growing was entered in the *khassra*, the other crop grown during the year being omitted. And as no crop statements were compiled at last settlement, the labour of extracting the crops from some five million fields would be altogether incommensurate with the benefit to be derived from the complete statement.

Crop statement,

The crop statement affords some indication of the extent of intermittent cultivation. It has been seen in connection with the rotation of crops that except in the Bhábar all regularly cultivated land is cropped in the rains. With negligible exceptions therefore, all land left fallow during the rains is intermittent cultivation. By the crop statement it is seen that this is very small in the northern parganas.—1 per cent. of total cultivation in Badhán, 1.9 in Cháandpur, 2.4 in Dewalgarh and 0.8 in Nágpur. In Bárahayún however, it is 8.3, in Chaundkot 9.2; in Malla Salán the northern and

eastern pattis bring down the amount to only 4·8; but in Talla Salán it reaches 10·2, and in Ganga Salán with its large proportion of *katil*, 19·2.

The area under spring crops is exactly half the total cultivation, in accordance with the standard rotation of a fallow every second winter. In places, intermittent cultivation in the second or third years of the rotation, is left fallow for two or three cold weathers in succession, but the average is brought up by the double cropped land of warm valleys.

The area under garden crops is almost negligible, less than 1,000 acres in all.

Coming to individual crops, the area under rice is 33,000 acres. The rice growing area in accordance with the rotation may be taken as double this, or 66,000, against 101,000 acres recorded as first class dry. On the other hand the area under wheat is 63,000 acres and the wheat land thus 126,000. Roughly then one-third of the land recorded as first class is capable of growing wheat but not rice. *Mandwá* the staple grain holds the premier place among the summer crops, which its position in the rotation of both first and second class lands obtains for it. The 32,000 acres under other crops consists mostly of vetches and peas, such as *urd*, *gahat* and *bhat*. These are late *khariif* crops and are grown like *mandwá* in the second year of the rotation balancing the early crops, rice and *jhangorá*. The only winter crop besides wheat which is extensively grown is barley. It exceeds the amount of wheat in Bárahsyún and Ganga Salán—in the latter case largely so, but in the remaining parganas takes the second place. As the proportion of good land in a pargana depends upon the extent of rice and wheat growing land compared with the extent of land which grows only *jhangorá* and barley, the average quality of the land of each pargana may be roughly gauged by the proportion borne by the total area under rice and wheat to the total area under *jhangorá* and barley. The following statement compares the parganas arranged according to the percentage which the former of these areas bears to the latter:—

Pargana.	Percentage.	Incidence of revenue per acre.			Remarks.
		Rs.	a.	p.	
Badhán	198	0	12	4	
Nágpur	154	0	11	7	
Malla Salán	112	0	10	8	
Dewalgarh	108	0	11	1	
Chaundkot	97	0	9	1	
Chánpur	93	0	10	7	
Talla Salán	74	0	9	0	
Bárahsyún	63	0	10	4	
Ganga Salán... ..	49	0	7	4	

Modifications of the assessments.

131. It has been already stated that the assessments as proposed were modified by the Board in the cases of Chaundkot and the Garhwál Bhabár. In the former case Rs. 738 were reduced and in the latter Rs. 42 were increased, thus reducing the total amount assessed from Rs. 166,893-8-0 to Rs. 166,197-8-0.

The revenue was also modified in some cases according to correction slips received from the Survey Department. Allusion has already been made to these. If it was

found that the assessable area was very much in excess of what had been supposed, or very much less than had been supposed, the revenue was altered correspondingly, unless the village had already received a revenue different from the calculated amount, which took into account the inexplicably small or large amount, as the case might be, of the assessable area. The difference in each village was usually not more than a rupee, though with the very small demand assessed on individual villages, this was an appreciable amount. Altogether the revenue of 99 villages was altered from this cause, resulting in an increase of Rs. 77 and a decrease of Rs. 109, a nett reduction of Rs. 32.

Furthermore at the time of survey, assessable area which was refused by the villagers was recorded as Government land. This, however, was not then struck off the assessable area, but under the orders of Mr. Partridge, was assessed, and the amount assessed thereon was included in the total reported to the Board. When engagements were taken the villages were offered this land at the revenue assessed thereon. If they accepted it, it was added to the common land and an engagement for the total revenue sanctioned by the Board taken. If they refused, an engagement was taken for the sanctioned amount less the revenue on this land. In Bárabsyún the land was accepted in all but eleven cases, and in Chaundkot in every case. But in the Saláns refusals were numerous. The engagements here were taken by the Deputy Collector, who followed the Bárabsyún procedure of taking engagements for amounts less than the sanctioned revenue without referring the matter to me. I was in fact entirely unaware of the procedure in question, or even of the fact that the area I had been assessing was not all village property, until my office in February last reported to me for orders the case of some villages in Malla Salán the engagements of which had been taken for less than the sanctioned amount. I immediately directed that all such assessable area should for the remaining parganas be altered to village common. The villagers had cultivated the land previous to settlement and there was every probability of their doing so again, while a police force to prevent cultivation of this land was neither possible nor desirable. As the revenue had been based on the assessable area and a consideration of the circumstances of the village as a whole, to allow certain villages to thus write off at pleasure a considerable portion of the Government demand was illogical. At the same time taking into consideration the fact that engagements had then been taken for the three Saláns, the amounts entered in the agreements for those parganas were allowed to stand, to obviate the necessity for taking new engagements. The total number of villages in which the revenue was thus reduced was 137 and the total revenue demand Rs. 241.

Bárabsyún was the only pargana in which the assessments were affected by the Gauna flood. It was in fact the only pargana besides Chaundkot in which the assessments were then complete. Altogether seven villages were affected and $17\frac{1}{2}$ acres were rendered unculturable, while 41 acres suffered more or less deterioration of quality, and the amount of revenue reduced was Rs. 37.

There were a large number of appeals against the assessments, and in 35 cases up to the end of July last the revenue had been reduced by the total sum of Rs. 160; being Rs. 32 in Bárabsyún, Rs. 67 in Chaundkot, Rs. 30 in Ganga Salán, Rs. 15 in Malla Salán and Rs. 16 in Talla Salán. The total revenue was thus reduced by Rs. 470 from Rs. 1,66,197-8-0, the sum sanctioned by the Board, to Rs. 1,65,727-8-0.

132. The assessments over the whole district excepting Bárabsyún and Chaundkot have only been in force for a single half year, and therefore little can be said of their working. The period has been, moreover, one of scarcity for the south of the district. But in the upper portions the new assessments have been collected as usual without the slightest difficulty, and the difficulty felt in the south extends also to Bárabsyún and Chaundkot, where, last year, collections were made with ease. There is no reason to suppose that any more difficulty will be found in collecting the new assessments than has been hitherto experienced in collecting the old ones.

Working of the assessments to date.

Statement showing the number of cases and appeals instituted and disposed of during the settlement years from 1890-91 to 1895-96.

Class of applications or cases.	Disposed of—										Appeals to settlement officers from their subordinates.				Remarks.			
	On their merits.					Otherwise than on their merits.					Decided.							
	Instituted.	For plaintiff.	For defendant.	Total on merits.	By consent or compromise.	By default of plaintiff.	By personal service of summons.	By substituted service of summons.	Total <i>ex parte</i> .	Withdrawn.	From any other cause.	Total decided otherwise than on merits.	Instituted.	Confirmed.		Reversed.	Remanded.	Total.
1.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I.—Boundary disputes, sections 40, 140, 144	1,383	612	601	1,213	75	11	...	...	...	20	64	170	167	128	20	19	167	
(a) Proprietary right	17,454	5,802	5,586	11,388	2,864	701	2	...	2	1,610	869	6,066	204	133	38	33	204	
(b) Cultivating right	4,192	1,535	1,007	2,542	1,093	177	...	...	...	241	137	1,650	53	38	2	13	53	
(c) Rent-free tenure	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Revenue free tenure	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(e) Cesses, section 66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(f) Any other matter under section 65	179	73	56	129	14	6	...	...	...	13	17	50	...	...	...	...	...
IX.—Miscellaneous	1,909	673	269	942	584	30	...	...	...	41	312	967	22	12	7	3	22	
Total	25,117	8,695	7,519	16,214	4,652	925	2	2	2	1,925	1,399	8,903	446	311	67	68	446	

VI.—Cases arising out of the partition of the record-of-rights.

133. The statement on the opposite page shews the litigation which took place during the currency of the settlement operations. Owing to the minute state of subdivision of property in land, litigation was, as might have been expected, plentiful. The greater number of disputes were, however, exceedingly petty, and that the parties were hardly seriously in earnest may be deduced from the fact of the very few appeals preferred. The cases were partly disputes registered by the Survey Department and partly suits filed after attestation. It was believed that *amins* sent to villages to attest land in the earlier cases, used their opportunity to foment fresh disputes, and the Board therefore ordered (22nd October 1894) that no disputes should be entertained after six weeks from the date of attesting the village papers. It will be seen that by far the larger number of cases referred to claims to be recorded as proprietor or cultivator of certain land. Rent cases are entirely absent, as the rents of tenants-at-will even when they exist are not fixed or determined in any way by the Settlement Officer in Garhwál. The rents of *kháckars* on the other hand, are all fixed by the arithmetical process of adding 20 per cent. to the Government revenue. So too, the purely arithmetical method of distributing the assessment in the cadastrally surveyed patts, has prevented the possibility of any litigation regarding them. Some appeals have been preferred to the Commissioner by certain co-sharers regarding the amount of revenue assigned to them by the *phánt*, though in no case were any objections made to the Settlement Officer or Settlement Deputy Collector, and as no one was impleaded in these appeals they may be regarded rather as assessment appeals than objections to the distribution. Nor are any cases shewn under this head for the non-castrally surveyed parts, where the revenue was distributed by the *málguzár* or *patwari*, because such objections were taken up executively. To allow the dissentient to implead these officials would have made the distribution an endless task. Such settlements of waste lands as were made, either took the form of claims to be entered as proprietor under VI (a) or were dealt with as grants in *nayábád*, under the ordinary district procedure. No formal partitions were made by the settlement department, though in many cases parties agreed to have the records so framed that it practically amounted to a partition, e.g., proprietors of common land agreed that each should be recorded as proprietor of land in his possession. I gather also that occasionally some sort of informal partition was made by the Deputy Collector in a similar way before I took charge of the settlement. These were, however, stopped under the Board's orders above noted. Such cases appear to have been shewn under VI (a). Perfect partitions, owing to the minuteness of existing *maháls*, are unknown in Garhwál.

Litigation.

134. For the purpose of keeping the new records up to date, the *patwari* staff in the cadastrally surveyed parts has been somewhat increased. The former staff consisted of 43 *patwaris* and four *kanúngos*; and 28 new *patwaris*, an assistant *patwari*, an extra *kanúngo* and an assistant *kanúngo* have been sanctioned by Government, and the men selected for the posts are such as have shewn special proficiency in the recent cadastral survey. The revision of the *patwari* circles in consequence, and the framing of rules for the guidance of *patwaris* in their work of the annual map and record correction, have been separately dealt with, and are only mentioned here as a corollary to the cadastral survey.

Additional *patwári* staff.

The village maps of the cadastrally surveyed part are also being printed by the Survey office, and when ready will be supplied on payment to the villagers, who will thus have every opportunity for becoming acquainted with the actual facts of their own and their neighbourers holdings, and if they are sensible, may be thereby saved many a reference to the law Courts.

Printing of maps.

CHAPTER VI.

FINANCIAL RESULTS.

The enhancement of revenue.

135. Regarding the increase of revenue effected by the present revision of settlement there is very little to be said, as the amount of that increase was fixed before the settlement began as fifty per cent. of the expiring demand. The duty of the Settlement Officer was merely to distribute this sum as evenly as possible over the district, and in so far as his results differed from it being either more or less, his settlement was, technically at any rate, faulty. The actual resulting demand as it stood on the last day of July 1896, with all alterations, resulting from appeals or otherwise, was somewhat more than the prescribed sum. The following statement compares the expiring and new demands for the whole district :—

	Expiring demand.		New demand.		Percentage of increase.
	Rs.	a. p.	Rs.	a. p.	
<i>Khālsa</i> ...	96,721	14 1	1,48,245	2 11	53·27
<i>Gānth</i> ...	7,711	10 6	10,651	14 1	38·13
<i>Sadābart</i> ...	3,649	0 0	5,267	0 0	44·34
<i>Muāfi</i> ...	148	6 4	531	15 0	259·46
Fee-simple ...	778	8 0	1,031	8 0	32·52
Total ...	1,09,009	6 11	1,65,727	8 0	52·03

The large increase under the head of *muāfi* is due to the village of Balbhadrapur in the Bhāhar now first coming under assessment. The difference in the percentage of increase between the *khālsa*, *gānth* and *sadābart* villages is chiefly due to the fact that the lands of the two last lie chiefly in the northern and non-cadastrally surveyed part, where the total enhancement averaged only 32 per cent. while those of the first lie for the most part in the cadastrally surveyed tract where it averaged nearly 56 per cent. The assessments on the *muāfi* and fee simple land and to some extent on *gānth* also are merely nominal for the purpose of calculating cesses. The pargana which has the largest enhancement is Talla Salan with 63·81 per cent. while Painkhanda gets no enhancement at all. The percentage of enhancement for each patti and pargana is given in Appendix V. The new demand, owing to progressive assessments and the fact that it comes into force in different parganas at different times, is not realized in full for several years. The demand on account of the new assessments during the period, year by year, is given in detail in Appendix V A., and works out for the whole district as under :—

	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.
	<i>Khālsa</i> ...	26,237 1 0	37,007 13 0	91,613 0 0	1,46,542 2 11	1,46,571 2 11
<i>Gānth</i> ...	1,186 0 0	1,719 4 0	6,136 9 0	10,581 14 1	10,581 14 1
<i>Sadābart</i> ...	509 0 0	509 0 0	2,878 0 0	5,247 0 0	5,247 0 0
<i>Muāfi</i> ...	15 15 0	15 15 0	273 15 0	531 15 0	531 15 0
Fee-simple ...	2 0 0	2 0 0	516 12 0	1,031 8 0	1,031 8 0
Total ...	27,950 0 0	39,254 0 0	1,01,418 4 0	1,63,934 8 0	1,63,963 8 0

	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
	<i>Khālsa</i> ...	1,47,189 2 11	1,47,924 2 11	1,47,924 2 11	1,48,084 10 11
<i>Gānth</i> ...	10,609 14 1	10,644 14 1	10,644 14 1	10,648 6 1	10,651 14 1
<i>Sadābart</i> ...	5,257 0 0	5,267 0 0	5,267 0 0	5,267 0 0	5,267 0 0
<i>Muāfi</i> ...	531 15 0	531 15 0	531 15 0	531 15 0	531 15 0
Fee-Simple ...	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0
Total ...	1,64,619 8 0	1,65,399 8 0	1,65,399 8 0	1,65,563 8 0	1,65,727 8 0

The total gain to Government from the *khālsā* villages is Rs. 51,523-4-0 annually or about ten lakhs of rupees during the currency of the settlement assuming this to last for twenty years.

A short explanation is necessary of the descent into annas and pies in several cases. In the fee simple it is due to one estate now unsurveyed being assessed at the previous demand. In the *khālsā*, *gūnth* and *muāfi* holdings it is due to certain assignments of revenue without any land being specified which might be separately assessed. These *gūnth* and *muāfi* holdings are of the nature of a *mālikāna* paid out of the Government revenue and are not separate *mahāls*. The assignment is usually a fixed sum, less than a rupee in amount and this was in most cases confirmed unaltered at the present settlement. These assignments which were from the nature of the case determined subsequently to assessment, explain also the difference between the *khālsā* revenue hitherto reported and that now shown.

136. The total cost of the survey and settlement is shown in detail in Appendix XIV. The following statement is an abstract therefrom :—

Cost of survey and settlement.

	Total up to end of August 1896.	On account of cadastrally surveyed part.	On account of non-cadastrally surveyed part.	Remarks.
Survey	3,23,705 7 3	3,23,705 7 3	...	
<i>Settlement.</i>				
Preparation of records ...	1,52,874 0 1	1,52,874 0 1	...	
Assessment	38,854 9 9	35,481 5 6	3,373 4 3	
Extra Deputy Collector's Court ...	18,387 15 10	18,387 15 10	...	
Total settlement ...	2,10,116 9 8	2,06,743 5 5	3,373 4 3	
Total survey and settlement ...	5,33,822 0 11	5,30,448 12 8	3,373 4 3	
Settlement office building ...	9,400 0 0	...	...
GRAND TOTAL ...	5,43,222 0 11	...	...

The survey figures are according to a return recently furnished by the Survey Department, and differ somewhat from those hitherto given. The cost of survey is Rs. 3,23,705-7-3 and of settlement Rs. 2,10,116-9-8. The cost of the Settlement Office building was debited by the Accounts Department to Public Works. But if it is included the total will be Rs. 5,43,222-0-11. Of this amount Rs. 5,39,848-12-8 was spent on the survey, record of rights and assessment of the cadastrally surveyed portion and Rs. 3,373-4-3 on the assessment of the non-cadastrally surveyed portion. The total surveyed area is approximately 952 square miles, and the assessable area of the non-cadastrally surveyed patts is about 39 square miles. This gives an incidence of Rs. 567 on the former and on the latter of Rs. 86 per square mile. Settlement in the hills must always be more expensive on the assessable area than in the plains. This is due to the enormous spaces over which this area is scattered. For instance the 39 square miles of assessable area in the non-cadastrally surveyed portion is scattered over nearly 3,000 square miles of total area and the carriage of tents and records and travelling allowance of officers over this space, alone amount to Rs. 1,200 or more than one-third of the total cost.

The figures of the total cost of survey and settlement do not include the cost of reproduction of field maps, a work which is not sufficiently advanced to make it possible to give approximate statistics of the total cost.

137. The settlement officially started on the 20th March 1890 and it was declared closed on the 4th July 1896, thus lasting in all a period of over six years. It was for the first six months in charge of Mr. Campbell, during the greater part of the next four years it was continued by Mr. Partridge, and during the last two it was concluded by myself. A certain amount of clerical work remains but this will be neither a large nor a lengthy matter.*

Concluding remarks.

Pandit Dharmanand filled the post of Settlement Deputy Collector throughout almost the whole period, and the work of attesting and revising the new records fell

* Since concluded vide note on page 80.

almost entirely on him. He was also in charge of the Fairing-out Office. He has shewn himself an active and intelligent officer and his expert advice has proved invaluable in determining the form of some of the new records, the mutation registers for instance, and in other matters.

Pandit Mánik Lál also exercised the powers of an Assistant Settlement Officer for deciding boundary disputes and the greater part of the thirteen hundred filed were settled by him in addition to his ordinary district work, which comprised for the first eighteen months the entire charge of a heavy sub-division—a sufficient proof of his characteristic energy.

Of the subordinate staff it is only necessary to notice the services of three, Káshi Rám Nautyál, the Superintendent of the Fairing-out office, Shib Singh, Kunwar, the English settlement clerk, and Rudra Datt Dhondyál, the vernacular *sarishtadár*. The first whose substantive post was Naib Tahsildar, took a well earned pension on the conclusion of his labours in the settlement office. The second remains as Land Record Peshkar, an office which the experience he has had in settlement work renders him most competent to fulfil. He has been most valuable in preparing statistics for the pargana and final reports, as well as in supervising the part of the office concerned with the assessments. Rudra Datt Dhondyál is one of those who are disparagingly spoken of in the present day as 'the old school' but he did especially good and sound work by his methodical treatment of files of disputes regarding the distribution of assessments in the non-cadastrally surveyed parts and was throughout of great assistance in tracing out files relating to important points regarding tenures. He now reverts to his substantive post as revenue record-keeper.

Of the work of the Survey Department which finished its field labours before I entered Garhwál, it is not possible for me to say more than to testify to the general excellence of such portions of it as came before me. The survey officials had to work in exceptionally difficult country, under very trying conditions, and it is not too much to say that whatever success has attended the effort to construct a regular and intelligible record of rights for Garhwál is due almost entirely to the indefatigable industry, and consistently high standard of accuracy, which have characterized their work.

E. K. PAUW, C.S.,

In charge of the settlement of Garhwál District.

APPENDICES.

Comparative area statement (total of

Table with columns: Name of pargana, Name of patti, Number of mahals, Whether khalsá, gúnth, sadábart, muáfi or fee simple, Settlement, Total area surveyed, Not assessable (Muáfi, Not culturable, Old fallow, Otherwise culturable, Total), Irrigable, 1st class dry, New. Rows include various parganas like Iúwálsyún, Kandwálsyún, Kápolálsyún, Khálsyún, Manyársyún, Nándálsyún, Patná- Paúdí- syún, Ráwátsyún.

* The muáfi revenue included

Assessment Statement No. 1)-(continued).

Table with columns: fallow (2nd class dry, Káfil, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Káfil, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-section 'SUBVYED PATTIS-(contd.)' and 'Ibt for Khálsá'.

in reckoning these incidences.

Comparative area statement (total of

Table with columns: Name of pargana, Name of patti, Number of mahals, Whether khalsá, Settlement, Total area surveyed, Not assessable (Muáf, Not culturable, Old fallow, Otherwise culturable, Total), Irrigable, New 1st class dry. Rows include Sitonsyón, Chau-thán, Choprákot, Dhajiyuli, Lobha, and Ráinigarh.

Assessment Statement No. I—(continued).

Table with columns: fallow (dry, 2nd class, Irrigated, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Kaffi, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-section 'SURVEYED PATTIS—(contd.)'.

APPEN

Comparative area statement (total of

Table with columns: Name of pargana, Name of patti, Number of mahals, Whether khalsá, gúnth, sadábart, muáß or fee simple, Settlement, Total area surveyed, Muck, Not cultivable, Old fallow, Otherwise cultivable, Total, Irrigable, New 1st class dry. Includes sub-sections for Chandpur, Chaundkot, and various parganas like Sirgur, Teili, Gurayün, Jauntol, Kingdigád, Maundrayün, Mawlayün.

DIX I.

Assessment Statement No. I.—(continued).

Table with columns: fallow (2nd class dry, Kattil, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Kattil, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-sections for SURVEYED PATTIS and khalsá above.

Comparative area statement (total of

Table with 13 columns: Name of pargana, Name of patti, Number of mahals, Whether khalsá, gúnth, sadábart, muáfi or fee simple, Settlement, Total area surveyed, Múáfi (padhanchári and thokári land), Net cultivable (village sites, roads, etc.), Old fallow, Otherwise cultivable (ush, jungle, etc.), Total, Irrigable, New 1st class dry. Includes sub-sections for King-wár-syún, Bidel-syún, Chabansyún, Dhampur, and Kamlársyún.

Assessment Statement No. I—(continued).

Table with 25 columns: fallow (2nd class dry, Kaffil, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Kaffil, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-sections for SURVEYED PATNIS and unsurveyed areas.

Comparative area statement (total of

Table with 13 columns: Name of pargana, Name of patti, Number of mohals, Whether khalsa, gunth, sadabart, muafi or fee simple, Settlement, Total area surveyed, Mufaf (pachanchari and thokdari land), Not culturable (village sites, roads, etc.), Old fallow, Otherwise culturable (bush, jungle, etc.), Total, Irrigable, 1st class dry, New. Includes sub-sections for Gauga Salán, Bangar ayun, Guj. Dhauudalsayun, Guj. Iriyakhok, Malia Salán, and Talain.

Assessment Statement No. I—(continued).

Table with 25 columns: 2nd class dry, Irrigated, Cultivation, Total assessable area, Incidence of revenue per acre of cultivation, Remarks. Includes sub-section for SUBVEYED PATTIS—(contd.).

APPEN
Comparative area statement (total of

Table with 13 columns: Name of pargana, Name of patti, Number of mahals, Whether khalsá, gúnth, sadá-bari, muáfi or fee simple, Settlement, Total area surveyed, Múafi (pochánchári and tikókári land), Not culturable (village sites, roads, etc.), Old fallow, Otherwise culturable (bush, jungle, etc.), Total, Irrigable, New 1st class dry.

• Second class irrigated all.
† First class irrigated. 847.
‡ This area is 3rd class
§ First class irrigated 82.
¶ First class irrigated 183.5.

DIX I.
Assessment Statement No. I—(continued).

Table with 25 columns: fallow (2nd class dry, Katti, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Katti, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks.

2nd class irrigated 52.6, total 137.3 dry.
2nd class irrigated .6, total 8.8
2nd class irrigated 48.3, total 231.8.

Comparative area statement (total of

Table with columns: Name of pargana, Name of patti, Number of mohals, Whether khálad, gúnth, sadábart, muáfi or fee simple, Settlement, Total area surveyed, Múáfi (podhánchári pad thokári land), Not culturable (village sites, roads, etc.), Old fallow, Otherwise culturable (bush, jungle, etc.), Total, Irrigable, 1st class dry, New. Includes sub-sections for Badván, Nandák, Pindarpár, and Bábayán.

Assessment Statement No. I) — (continued).

Table with columns: follow, 2nd class dry, Kattil, Total, Irrigated, 1st class dry, 2nd class dry, Kattil, Total, Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-sections for SURVEYED PATTIS—(conld.) and SURVEYED PATTIS.

APPEN

Comparative area statement (total of

DIX I.

Assessment Statement No. I--(continued).

Table with columns: Name of pargana, Name of patti, Number of maháls, Whether khálsá, gúnth, saddavart, muáfí or fee simple, Settlement, Total area surveyed, Not assessable (Muáfí, Not culturable, Old fallow, Otherwise culturable, Total), Irrigable, New (1st class dry), Remarks. Includes sub-sections for Chandpur, Dasauli, and Dewalgarh.

Table with columns: fallow (2nd class dry, Irrigated, Total), Cultivation (Irrigated, 1st class dry, 2nd class dry, Total), Total assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-sections for SURVEYED PATTIS and both settlements.

APPEN
Comparative area statement (total of

DIX I.

Assessment Statement No. 1.—(continued).

1	2	3	4	5	6	Not assessable.					New	
						7	8	9	10	11	12	13
Name of pargana.	Name of patti.	Number of mahals.	Whether khálsá, gúnth sadábart, muáfí or fee simple.	Settlement.	Total area surveyed.	Muáfí (pudhánchári and thokdári land).	Not culturable (village sites, roads, etc.).	Old fallow.	Otherwise culturable (bush jungle, etc.).	Total.	Irrigable.	1st class dry.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
...	Former ... Present ...	2,945.3	...	...	253.1	...	253.1	...	...
...	Former ... Present ...	260.3	...	...	17.9	...	17.9	...	...
...	Former ... Present ...	3,205.6	...	...	271.0	...	271.0	...	...
...	Former ... Present ...	146.7	...	...	19.9	...	19.9	...	...
...	Former ... Present ...	289.9	...	...	97.8	...	97.8	...	...
...	Former ... Present ...	436.5	...	...	117.7	...	117.7	...	...
...	Former ... Present ...	1,629.7	...	...	187.8	...	187.8	...	...
...	Former ... Present ...	493.0	...	...	25.3	...	25.3	...	...
...	Former ... Present ...	2,122.7	...	...	213.1	...	213.1	...	...
...	Former ... Present ...	90.4	...	...	15.7	...	15.7	...	...
...	Former ... Present ...	939.9	...	...	457.3	...	457.3	...	...
...	Former ... Present ...	1,030.3	...	...	473.0	...	473.0	...	...
...	Former ... Present ...	345.1	...	...	39.1	...	39.1	...	...
...	Former ... Present ...	5,019.4	...	...	479.4	...	479.4	...	...
...	Former ... Present ...	2,313.4	...	...	229.0	...	229.0	...	...
...	Former ... Present ...	1,622.9	...	...	670.3	...	670.3	...	...
...	Former ... Present ...	8,955.7	...	...	1,378.7	...	1,378.7	...	...
...
...
...
...
...

* Area of one

Fallow.			Cultivation.						Total assessable area.	Incidence of revenue per acre of cultivation.	Incidence of revenue per acre of assessable area.	Remarks.
2nd class dry (Jírán).	Kasfi.	Total.	Irrigated.	1st class dry.	2nd class dry.	Kasfi.	Total.					
...	
...	
...	
...	
...	
...	
...	
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...	
...	

village Kosá only.

Comparative area statement (total of

Table with columns: Name of pargana, Name of patti, Number of makals, Whether khalsá, gúnth, sadábart, mudáft or fee simple, Settlement, Total area surveyed, Mudáft (padhanchári and thokáári land), Not culturable (village sites, roads, etc.), Old fallow, Otherwise culturable (bush, jungle, etc.), Total, Irrigable, 1st class dry, New. Includes sub-sections for 'Total of the pargana', 'Total of the non-cadastrally surveyed pattis', and 'Total of the district of Garhwál'.

* The area and revenue of Patti Malla Paikhandá are excluded in reckoning these incidences.
† The area and revenue of Malla Paikhandá have been excluded in reckoning these incidences.
‡ The incidences are reckoned only on Rs. 115 the revenue of the revenue of unsurveyed fee simple villages is excluded in reckoning these incidences.
§ The area and revenue of Malla Paikhandá and also the revenue of the unsurveyed fee simple villages is excluded in reckoning these incidences.
NOTE.—Columns 17 to 22 include the figures for the present estimated

Assessment Statement No. I—(concluded).

Table with columns: 2nd class dry (Jyárá), Káfil, Total, Irrigated, 1st class dry, 2nd class dry, Káfil, Total, Tot assessable area, Incidence of revenue per acre of cultivation, Incidence of revenue per acre of assessable area, Remarks. Includes sub-section 'SUBVEYED PATTIS—(concl'd.)'.

from reckoning these incidences as only one village of that patti was measured at last settlement.
in reckoning these incidences.
Gadoli and Chopra of which the last settlement areas are known.
reckoning the incidences.
of the unsurveyed fee simple villages except Gadoli in Bárahayún is excluded in reckoning up these incidences.
in reckoning these incidences.
cultivation also, while column 6 does not include it.

APPENDIX IA.

Statement showing the area by parganas in Garhwál District (cadastrally surveyed portions only) as initially returned by the Survey Department.

Serial number.	Name of pargana.	Total number of the villages in the pargana.	Not culturable (village sites, roads, &c.).	Culturable.							Cultivation.					Total area surveyed.	Remarks.		
				New fallow.				Old fallow.	Otherwise culturable (bush, jungle, &c.).	Total.	Irrigated.	Dry.						Total cultivation.	
				Irrigable.	1st class dry.	2nd class dry.	Kaifil.					1st class dry.	2nd class dry.	Kaifil.	Total dry.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
			Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
1	Badhán ...	241	1,484.9	2.9	27.9	331.4	3	842.4	12,909.4	14,114.3	158.2	4,764.8	2,994.2	5	7,759.5	7,917.7	23,516.9		
2	Bárahyaún ...	796	11,487.8	48.1	446.8	6,150.8	488.4	28,006.1	7,980.8	43,131.0	1,144.5	18,331.0	22,750.6	1,638.7	42,720.3	43,864.8	98,483.6		
3	Chándpur ...	529	3,942.5	22.3	127.9	1,662.7	25.4	2,000.2	40,743.0	44,581.5	601.2	11,619.6	12,030.8	36.8	23,687.2	24,288.4	72,812.4		
4	Chaundkot ...	316	3,761.6	11.3	176.2	1,472.6	28.2	12,474.6	3,746.5	17,909.4	526.6	10,636.3	9,006.0	72.6	19,714.9	20,241.5	41,912.5		
5	Dewalgarh ...	475	3,763.1	14.8	124.5	734.1	2.4	9,080.8	16,529.9	26,486.5	1,055.1	11,410.3	7,658.2	8.1	19,076.6	20,131.7	50,386.3		
6	Gangú Salán ...	568	8,553.6	57.8	240.0	5,507.6	1,133.7	2,184.3	73,437.4	82,610.8	881.6	13,504.8	27,567.3	5,549.2	46,621.3	47,502.9	1,38,667.3		
7	Malla Salán ...	521	4,910.0	22.6	145.6	1,544.5	18.3	8,438.2	24,933.0	35,102.2	707.3	14,329.4	12,678.3	121.1	27,128.8	27,836.1	67,848.3		
8	Talla Salán ...	689	5,417.7	44.7	196.7	2,870.1	144.7	2,443.5	40,968.0	46,667.7	2,283.6	13,199.9	17,544.4	1,101.1	31,845.3	34,128.9	86,214.3		
9	Nágpur ...	253	2,108.9	7.1	48.4	339.7	45.7	457.4	15,444.6	16,342.9	739.0	6,349.2	4,674.6	4.9	11,028.7	11,767.7	30,219.5		
	Total ...	4,388	45,435.1	231.6	1,534.0	20,613.5	1,887.1	65,927.5	2,36,752.6	3,26,946.3	8,097.1	1,04,145.3	1,16,904.4	8,532.9	2,29,582.8	2,37,679.7	6,10,061.1		

E. K. PAUW, C.S.

In charge of the Settlement.

APPENDIX II.

Statement showing details of holdings in the district of Garhwal (Cadastrally surveyed patta).

Serial number of pargana.	Name of pargana.	Atlast settlement.												Remarks.	
		Hissedárs.			Kháekars.			Sirtáns.			Total.				
		Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.	Number.	Area.		
1	2	3	4	5	6	7	8	9	10	11					
1	Radhán	1,527	3,498.2	710	1,149.2	Rs. 420	218.6	Acres. 2,657	4,866.0						
2	Bámshyún	5,140	23,098.8	2,637	3,968.0	3,571	2 10	2,328	1,791.4	10,105	28,768.2				
3	Chandpur	2,822	10,140.1	1,743	3,410.4	2,707	12 8	1,259	755.4	5,824	14,369.9				
4	Chandkot	2,154	8,329.1	1,690	2,371.4	2,286	4 8	1,150	770.3	4,374	11,471.0				
5	Dewalgarh	3,352	8,230.1	1,242	1,568.4	1,715	11 0	793	418.2	5,387	10,216.7				
6	Ganga Salán	3,294	17,295.9	1,404	2,639.9	2,331	2 9	1,645	2,157.4	6,348	22,095.2				
7	Malla Salán	2,691	8,106.8	3,074	6,425.0	8,013	8 11	773	432.7	6,538	14,964.5				
8	Nágpur	1,910	3,630.7	1,668	2,560.3	3,160	11 5	928	482.9	4,506	6,653.9				
9	Talla Salán	2,677	11,824.7	1,111	2,521.2	2,309	11 8	776	806.1	4,564	15,152.0				
	Total of the district	25,567	94,064.4	13,679	26,613.8	27,951	1 8	10,632	7,813.2	50,208	1,28,491.4				
1	2	12	13	14	15	16	17	18	19	20	21	22			
1	Radhán	1,216	5,190.4	766	2,163.0	808	1,743.6	Rs. 642	10 6	14,278.3	2,790	23,375.3			
2	Bámshyún	9,743	47,177.0	2,502	5,311.2	3,421	5,616.4	811	4 1	39,816.1	15,606	98,525.7			
3	Chandpur	3,860	17,558.3	2,640	6,390.4	1,130	4,649.5	1,247	7 4	44,057.2	6,639	72,655.4			
4	Chandkot	2,735	17,102.8	1,520	4,678.9	1,261	2,155.8	380	3 7	17,944.9	5,516	41,882.4			
5	Dewalgarh	4,472	17,564.3	1,331	3,611.2	728	1,785.7	378	0 4	26,913.2	6,531	43,874.4			
6	Ganga Salán	4,923	45,235.6	1,080	5,971.7	1,475	4,336.6	1,499	0 8	82,650.1	7,478	1,38,851.0			
7	Malla Salán	3,294	16,512.7	3,713	14,314.8	1,139	1,386.6	682	15 9	35,548.3	8,146	67,762.4			
8	Nágpur	1,872	7,210.2	1,480	4,699.2	982	736.7	510	10 7	17,448.3	4,334	30,094.4			
9	Talla Salán	2,381	29,593.2	1,131	6,211.9	846	3,054.5	1,125	14 8	47,622.7	4,958	86,512.3			
	Total of the district	35,096	2,03,144.5	15,163	53,997.3	11,799	26,122.4	7,287	3 8	3,26,279.1	62,058	6,09,533.3			

E K PAUW, C.S.
In charge of the Settlement.

APPEN

Statement showing area under each crop, in the survey

Pargana.	Serial number of patts.	Name of patti.	Au			
			Pepper.	Rice.	Chua.	Mandwa.
1	2	3	4	5	6	7
			Acres.	Acres.	Acres.	Acres.
Badhán.	1	Kapiri	1'0	386.8	30.2	492.4
	2	Karukot	6	361.6	112.0	523.2
	3	Khansar	8	152.1	3.5	216.3
	4	Pindarwar	9.9	1,284.7	157.8	1,427.5
		Total, Badhán	12.3	2,185.2	303.5	2,664.4
Bárahayún.	1	Aswálsyún	3.5	609.8	15.6	1,638.3
	2	Banelsyún	15.2	350.7	2.2	1,151.1
	3	Bangarhsyún	3.8	198.0	.9	725.1
	4	Gagwársyún	3.2	405.0	.9	991.6
	5	Idwálsyún	2.3	546.1	1.7	984.9
	6	Kandwálsyún	1.5	52.1	23.7	341.9
	7	Kapholsyún	3.2	407.8	3	950.0
	8	Khátsyún	2.1	308.1	1.2	720.5
	9	Manársyún	25.5	495.1	3.2	1,755.3
	10	Nándalsyún	1.6	558.8	1.6	757.9
	11	Paidúlsyún	1.7	501.7	8	1,268.0
	12	Patwálsyún	1.5	119.0	68.1	480.4
	13	Ráwntsyún	1.1	92.6	2.6	331.7
	14	Sitonsyún	2.0	560.0	2.7	1,526.9
	Total, Bárahayún	68.2	5,224.8	126.2	13,623.6	
Chándpur.	1	Chauthán	8.7	235.9	37.7	1,283.2
	2	Choprakot	7.3	445.7	117.1	1,638.0
	3	Dhaijyuli	1.3	119.0	149.9	571.1
	4	Lohba	14.1	627.8	69.3	1,620.8
	5	Ránigarh ... ..	.3	83.9	89.9	195.5
	6	Sili	4.3	748.3	168.4	1,110.5
	7	Sirgúr	1.3	251.4	161.1	306.4
	8	Taili	3.6	1,044.7	244.9	1,429.7
	Total, Chándpur	40.9	3,556.7	1,038.3	8,160.2	
Chaundkot.	1	Gurársyún	13.2	555.3	.4	1,226.5
	2	Jaintolsyún	4.0	216.0	.0	689.9
	3	Kimgadigad	24.6	431.5	4.5	982.4
	4	Maundársyún	20.2	582.0	.3	1,935.9
	5	Mawálsyún	25.8	795.6	6.5	1,339.9
	6	Pinglápákhá	11.0	244.4	.1	404.9
	7	Bingwársyún	13.9	384.2	.6	683.8
	Total, Chaundkot	112.7	3,169.0	12.4	7,262.4	
Dewalgarh.	1	Bachhansyún	2.1	559.9	55.8	1,003.6
	2	Bidolsyún	3.4	134.5	.2	404.0
	3	Chalansyún	4.3	625.7	11.1	871.2
	4	Dhanpur	1.5	890.1	101.0	722.1
	5	Ghuradorsyún	3.7	420.7	10.0	937.3
	6	Kandársyún	10.2	450.9	149.4	1,322.9
	7	Kuthúlsyún	1.8	948.1	8.0	453.5
	Total, Dewalgarh	27.0	4,029.9	335.5	5,714.6	

DIX III.

year in the cadastrally surveyed patts of Garhwál district.

tunn.						
Hemp.	Maize.	Jhangora	China.	Other crops.	Total autumn.	Percentage.
8	9	10	11	12	13	14
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
0	14.4	400.5	...	121.2	1,446.5	97.8
...	10.8	452.8	...	119.0	1,585.0	97.4
1	12.1	163.5	...	33.2	581.6	98.5
3.4	25.4	782.7	...	521.1	4,212.5	99.3
3.5	62.7	1,799.5	...	794.5	7,825.6	99.0
2.4	88.1	1,641.0	...	898.1	4,896.8	91.4
3	115.3	2,005.1	103.5	1,420.5	5,163.9	88.2
...	21.3	814.7	...	528.0	2,292.2	96.4
2.6	25.7	693.9	...	283.3	2,406.2	93.3
...	27.1	1,129.8	...	459.0	3,150.9	94.9
1.4	64.7	502.4	65.4	288.3	1,341.4	95.2
1.7	32.1	614.1	...	376.7	2,385.9	98.5
3.9	13.2	542.0	...	219.3	1,810.3	97.5
4	124.6	2,625.7	...	1,525.7	6,555.5	82.3
1	30.3	352.2	...	150.1	1,853.3	97.5
4.8	32.2	899.8	...	204.7	2,913.7	98.6
2.0	15.6	251.2	...	256.5	1,194.3	85.9
...	6.0	413.0	...	211.8	1,058.8	97.7
6	36.6	848.5	...	430.3	3,427.6	94.9
20.2	632.8	13,333.4	169.3	7,252.3	40,450.8	91.7
42.8	21.3	1,012.5	...	471.9	3,119.0	97.7
32.8	28.3	1,427.2	...	1,369.8	5,126.2	97.5
42.5	4.8	268.5	...	674.1	1,831.2	98.0
39.2	32.5	1,038.7	6.1	1,009.3	4,457.8	98.2
...	5.3	179.8	...	27.9	582.6	98.7
79.4	30.0	929.8	...	408.3	3,479.0	98.8
17.0	6.4	273.2	...	127.7	1,144.5	99.4
53.8	27.8	1,037.2	...	198.3	4,042.0	98.2
369.5	156.4	6,166.9	6.1	4,287.3	23,762.3	98.1
5.3	55.1	625.7	...	431.2	3,112.7	93.7
2.4	22.7	534.4	...	136.3	1,605.7	90.4
15.2	13.3	661.7	...	262.5	2,305.7	98.6
1.3	106.4	1,695.5	...	1,237.7	5,579.9	83.0
10.7	22.8	727.7	...	255.4	3,183.5	96.5
5.9	14.1	266.7	...	104.6	1,011.7	99.1
2.4	10.0	199.7	...	163.5	1,458.1	89.5
43.8	244.4	4,911.4	...	2,591.2	18,347.3	90.6
16.0	12.4	846.4	...	353.1	2,840.3	98.2
3.9	7.5	221.2	...	98.1	872.8	94.4
7.6	19.1	1,055.3	...	712.2	3,306.5	96.6
3.3	32.9	1,001.2	...	312.8	3,064.9	98.6
7.6	26.4	987.1	...	246.1	2,638.9	99.2
51.2	28.4	1,038.1	...	633.3	3,684.4	97.3
3	33.8	1,439.5	...	224.3	3,109.3	97.3
89.9	160.5	6,588.8	...	2,579.9	19,526.1	97.6

Statement showing area under each crop, in the survey

Pargana.	Serial number of patti.	Name of patti.	Acres.			
			Pepper.	Rice.	Chuz.	Mandwa.
1	2	3	4	5	6	7
Ganga Salán.	1	Ajmír ...	10.8	546.0	3.0	2,011.7
	2	Dhángú Malla ...	4.4	347.1	2.8	2,257.6
	3	Dhángú Talla ...	31.4	296.5	2.9	1,076.5
	4	Karondú Palla ...	.7	102.2	1.2	772.2
	5	Karondú Walla ...	1.6	125.0	.2	516.1
	6	Langúr ...	6.1	549.9	3.8	2,549.0
	7	Udepur Bichla ...	55.4	819.7	6.6	2,762.3
	8	Udepur Malla ...	14.8	278.1	6.3	1,210.4
	9	Udepur Talla ...	8.2	538.5	1.1	2,624.7
			Total, Ganga Salán ...	133.4	3,603.0	27.9	15,780.5
Malla Salán.	1	Bangársyún ...	10.6	242.1	1.4	564.0
	2	Dhaundyálsyún ...	15.6	216.1	5.5	652.6
	3	Gujrú ...	3.9	517.0	...	1,064.6
	4	Iriyákot ...	41.2	744.5	1.3	2,206.9
	5	Khátli ...	55.7	975.3	3.5	2,239.6
	6	Kolágád ...	11.0	231.1	.1	541.8
	7	Meldhár ...	4.6	69.4	12.0	230.0
	8	Sáblí ...	28.6	819.2	1.9	1,659.9
	9	Saindbár ...	30.1	113.3	.7	456.3
	10	Talain ...	55.1	675.2	.2	1,222.2
		Total, Malla Salán ...	256.3	4,803.2	26.6	10,837.8
Nág-pur.	1	Nágpur Bichla ...	1.3	1,326.9	340.0	2,481.9
	2	Nágpur Talla ...	1.8	1,143.2	57.2	1,866.0
		Total, Nágpur ...	3.1	2,470.1	397.2	4,347.9
Talla Salán.	1	Badalpur Malla ...	0.6	501.1	2.6	1,569.8
	2	Badalpur Talla ...	4.6	297.7	...	807.6
	3	Bijlot Palla ...	15.8	603.0	...	1,242.4
	4	Bijlot Walla ...	1.6	391.6	...	900.6
	5	Bángí ...	22.0	448.4	.8	1,104.1
	6	Kauriyá Palla ...	.1	54.2	...	157.2
	7	Kauriyá Walla ...	2.8	111.7	...	573.3
	8	Painon ...	54.4	1,100.6	.5	2,035.6
	9	Sila Malla ...	.9	629.9	7.4	1,372.7
	10	Sila Talla ...	.4	264.0	2.1	415.6
	11	Bhábar (settled villages) ...	...	230.7	...	3.3
		Total, Talla Salán ...	112.2	4,632.9	13.4	10,182.2
		GRAND TOTAL ...	766.1	33,474.8	2,281.0	78,573.6

year in the cadastrally surveyed patti of Garhwal district—(continued).

Hemp.	Maize.	Jhangora.	China.	Other crops.	Total autumn.	Percentage.		
							Acres.	Acres.
8	9	10	11	12	13	14		
20	91.0	1,053.0	...	749.3	4,466.8	78.4		
.1	96.2	1,595.2	...	750.5	5,053.9	82.4		
13	140.8	1,845.0	...	1,396.7	4,791.1	84.3		
.6	27.2	578.5	...	242.6	1,725.2	80.8		
.5	25.7	411.4	3.1	239.4	1,323.0	81.0		
4.6	97.4	1,925.7	...	1,145.0	6,281.5	83.8		
...	63.1	1,102.2	...	672.8	5,482.1	78.3		
...	42.7	1,171.0	...	611.2	3,334.5	81.0		
.3	62.9	1,962.1	...	817.9	6,015.7	77.8		
		9.4	647.0	3.1	6,625.4	38,473.8	80.8	
5.2	12.6	413.2	...	87.2	1,336.3	99.3		
8.2	19.4	534.7	...	228.2	1,680.2	98.9		
5.1	73.6	805.1	...	259.3	2,728.6	93.5		
29.7	130.7	1,818.0	...	728.5	5,700.8	69.6		
29.9	104.3	1,715.9	...	267.6	5,391.7	98.1		
6.5	24.6	366.0	...	63.5	1,244.6	93.2		
9.7	5.6	155.4	...	124.7	611.4	98.8		
23.9	53.2	1,075.0	...	240.4	3,902.1	98.3		
3.3	9.8	370.9	...	28.4	1,012.8	95.9		
8.2	28.1	752.4	...	136.7	2,878.1	97.8		
		129.7	461.9	8,006.6	2,164.5	28,486.6	95.2	
...	90.0	1,683.0	...	550.4	6,470.5	98.9		
1.7	82.6	1,582.7	...	301.8	5,037.0	99.6		
		1.7	172.6	3,265.7	858.2	11,516.5	99.2	
16.7	131.8	2,241.6	...	906.6	5,379.8	89.3		
6.1	70.1	656.9	...	315.6	2,158.6	89.5		
7.6	61.2	814.5	...	325.8	3,069.8	97.2		
3.7	46.4	748.9	...	267.6	2,358.4	95.7		
8.8	77.5	1,147.7	...	591.8	3,401.1	92.9		
...	109.7	151.4	...	483.4	87.1	87.1		
3.6	40.8	714.2	...	390.2	1,842.6	81.9		
10.2	175.1	1,632.2	...	512.1	5,526.7	90.8		
3.7	131.4	1,506.9	...	1,072.8	4,725.7	93.4		
.1	26.4	271.2	...	373.4	1,353.2	79.6		
...	...	...	...	34.0	268.0	56.9
		66.5	777.5	9,883.5	4,899.1	30,567.3	89.8	
		734.2	3,315.8	65,599.9	178.5	32,052.4	2,16,976.3	91.4

Statement showing area under each crop, in the survey

Pargana.	Serial number of patais.	Name of patti.	Spring.							Percentage.
			Wheat.	Barley.	Rape.	Mustard.	Other crops.	Total spring.		
			15	16	17	18	19	20	21	
			Acres.	Acres.	Acres.	Acres.	Acres.	Acres.		
Ganga Salán.	1	Ajmír ...	891.6	1,665.0	.7	57.1	5.5	2,619.9	46.0	
	2	Dhangú Malla ...	1,198.1	1,332.0	.4	58.2	1.5	2,590.2	42.2	
	3	Dhangú Talla ...	834.1	1,589.2	.2	56.7	1.0	2,481.2	43.6	
	4	Karonda Palla ...	429.6	418.5	...	23.6	1.5	868.2	40.7	
	5	Karonda Walla ...	295.5	480.6	1.5	15.3	2.0	794.9	49.0	
	6	Langúr ...	1,486.1	1,759.3	.7	75.1	6.3	3,227.5	44.4	
	7	Udepur Bichla ...	1,139.6	2,014.7	.9	62.5	4.8	3,222.5	46.1	
	8	Udepur Malla ...	508.2	1,528.1	2.2	31.6	1.3	2,071.4	50.3	
	9	Udepur Talla ...	1,650.4	2,272.4	.3	76.1	6.1	4,005.3	51.8	
			Total, Ganga Salán ...	8,433.2	13,054.8	6.9	456.2	30.0	21,981.1	46.2
Malla Salán.	1	Bangársyún ...	433.6	211.6	...	5.3	...	650.5	48.4	
	2	Dhaundyálsyún ...	428.7	355.7	...	9.8	...	794.2	46.8	
	3	Gujrú ...	1,224.2	290.7	.2	31.0	...	1,546.1	62.9	
	4	Iryákot ...	1,996.9	1,195.4	.1	50.2	2.0	3,244.6	60.5	
	5	Khátlí ...	1,917.2	941.9	...	54.6	...	2,913.7	52.9	
	6	Kolagád ...	554.3	140.5	.1	19.0	.3	714.2	53.4	
	7	Mekhdár ...	135.8	134.6	...	3.4	...	277.8	44.9	
	8	Sabli ...	1,397.5	590.3	.5	36.1	.1	2,024.5	51.0	
	9	Saindhar ...	379.8	126.6	...	10.8	...	517.2	48.9	
	10	Talain ...	971.5	540.5	.1	22.4	4.5	1,539.0	52.3	
		Total, Malla Salán ...	9,139.5	4,531.8	1.0	242.6	6.9	14,221.8	51.1	
Nágpur.	1	Nágpur Bichla ...	2,426.7	852.2	.1	40.7	2.4	3,322.1	60.7	
	2	Nágpur Talla ...	2,167.3	461.0	4.5	42.0	.4	2,675.2	62.9	
		Total, Nágpur ...	4,594.0	1,313.2	4.6	82.7	2.8	5,997.3	51.7	
Talla Salán.	1	Badalpur Malla ...	1,342.2	1,850.1	...	13.0	.1	3,205.4	53.1	
	2	Badalpur Talla ...	609.0	552.2	...	8.7	.2	1,170.1	48.4	
	3	Bijlot Palla ...	986.3	671.2	.1	19.3	11.6	1,688.5	50.2	
	4	Bijlot Walla ...	950.2	290.4	...	20.6	...	1,261.2	51.2	
	5	Búngi ...	1,051.3	734.1	...	15.0	13.2	1,813.6	49.5	
	6	Kauriyá Palla ...	70.7	195.4	...	5.4	...	271.5	49.0	
	7	Kauriyá Walla ...	316.6	884.3	...	13.2	...	1,214.1	53.8	
	8	Paion ...	1,922.6	1,212.3	.15	79.4	21.3	3,237.1	53.2	
	9	Sila Malla ...	653.0	1,450.3	4.9	24.9	.2	2,334.2	46.1	
	10	Sila Talla ...	431.4	421.9	.6	12.4	1.7	868.0	50.9	
	11	Bhábar (settled villages),	213.7	1.7	...	160.5	11.0	387.8	82.4	
		Total, Talla Salán ...	8,747.9	8,263.9	7.1	372.4	60.2	17,451.5	51.2	
		GRAND TOTAL ...	63,848.7	51,995.0	39.8	2,692.9	254.8	1,18,831.2	50.0	

* This includes 2,35,566.1 acres, the cultivated area assessed and

year in the cadastrally surveyed patais of Garhwal district—(concluded).

Tobacco.	Vegetables.	Ocher crops.	Total garden.	Percentage.	Grand total.	Percentage.	Deduct on account of double cropped area.	Nett cultivation.	Remarks.										
										22	23	24	25	26	27	28	29	30	31
										Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.		
6.1	2.0	3.0	11.1	.2	7,097.8	124.6	1,402.6	5,695.2											
7.3	2.3	1.4	11.0	.2	7,655.1	124.8	1,522.0	5,133.1											
19.1	1.6	2.9	23.6	.4	7,295.9	128.3	1,613.0	5,682.9											
4.2	1.7	1.2	7.1	.3	2,600.5	121.8	466.8	2,133.7											
.6	1.2	1.5	3.3	.2	2,121.2	130.2	490.3	1,630.9											
7.8	4.2	5.3	17.3	.2	9,626.3	128.4	2,134.8	7,491.5											
7.3	2.1	2.5	11.9	.1	8,716.5	124.4	1,719.0	6,997.5											
4.2	.6	1.1	5.9	.1	5,411.8	131.4	1,294.1	4,117.7											
15.4	1.5	2.7	19.6	.2	10,040.6	129.8	2,309.2	7,731.4											
					72.0	17.2	21.6	110.8	.2	60,565.7	127.2	12,951.8	47,613.9						
1.4	2.8	.7	4.9	.3	1,991.7	148.0	646.2	1,345.5											
.5	2.2	.7	3.4	.2	2,477.8	148.9	779.8	1,698.0											
1.3	3.3	.3	4.9	.2	4,279.6	146.6	1,360.7	2,918.9											
7.1	3.8	1.2	12.1	.2	8,957.5	139.3	2,525.7	6,431.8											
14.7	10.9	6.3	31.9	.6	8,337.3	151.6	2,840.4	5,496.9											
2.6	3.5	2.2	8.3	.6	1,967.1	147.2	630.7	1,336.4											
.2	1.1	...	1.3	.2	890.5	143.9	271.7	618.8											
10.8	8.4	5.2	24.4	.6	5,951.0	149.9	1,982.2	3,968.8											
1.1	4.4	1.4	6.9	.7	1,536.9	145.5	480.9	1,056.0											
6.7	15.7	2.2	24.6	.9	4,441.7	151.0	1,429.3	2,942.4											
					46.4	56.1	20.2	122.7	.5	40,831.1	146.7	13,017.6	27,813.5						
28.7	1.1	6.2	36.0	.5	9,837.6	150.7	3,235.8	6,551.8											
9.8	1.3	1.6	12.7	.2	7,724.9	152.7	2,670.0	5,054.0											
					38.5	2.4	7.8	48.7	.4	17,562.5	151.3	5,956.7	11,605.8						
8.8	4.3	.8	13.9	.2	8,599.1	142.6	2,572.9	6,026.2											
.6	.8	1.8	3.2	.1	3,391.9	138.0	918.4	2,413.5											
4.0	2.1	...	6.1	.1	4,764.4	141.5	1,398.8	3,365.6											
.8	1.7	.1	2.6	.1	3,622.2	147.0	1,159.6	2,462.6											
3.8	1.6	.3	5.7	.1	5,220.4	142.5	1,558.8	3,661.6											
.1	...	...	.1	.0	755.0	136.1	200.3	554.7								
2.8	1.9	...	4.7	.2	3,061.4	135.9	810.3	2,251.1											
12.2	4.9	...	17.5	.2	8,781.3	144.2	2,699.3	6,082.0											
.6	5.1	2.8	8.5	.1	7,068.4	139.6	2,011.3	5,057.1											
.2	1.6	1.1	2.9	.1	2,224.1	130.6	522.4	1,701.7											
42.8	...	...	42.8	9.0	698.6	148.3	227.8	470.8									
					76.7	24.0	7.3	108.0	.3	48,126.8	141.3	14,079.9	34,046.9						
					528.7	301.9	155.3	985.9	.4	3,36,798.4	141.8	99,288.7	*2,37,504.7						

1,988.6 acres of padhánchári and thokádri land under cultivation.

APPENDIX IV.

Statement showing the village statistics for Garhwál district as reported by the Patwáris.

Serial number of pargana.	Name of pargana.	Number of families.	Total population.	Males.		Females.	Bráhmans.	Chhattáris.	Christians.	Doms.
				Over 16.	Under 16.					
1	2	3	4	5	6	7	8	9	10	11
1	Badhán ...	5,350	20,381	8,011	6,195	14,575	5,805	18,038	...	4,427
2	Bárahayún ...	10,969	55,713	16,118	11,543	28,032	16,086	30,349	278	8,809
3	Cháandpur ...	7,365	38,818	10,650	8,421	19,747	6,785	27,677	50	4,581
4	Chaandkot ...	5,126	26,231	7,550	5,470	13,211	8,067	13,345	16	4,382
5	Dawalgarh ...	6,218	33,311	9,887	6,961	16,963	7,605	20,865	89	4,392
6	Dasauli ...	2,008	12,120	3,522	2,448	6,150	3,030	6,322	18	2,025
7	Gangá Salán ...	9,083	49,338	14,086	10,651	24,801	15,486	24,204	14	9,168
8	Mallá Salán ...	9,129	46,459	12,787	10,213	23,459	10,662	28,822	...	6,484
9	Nágpur ...	4,891	26,340	7,003	5,491	13,446	3,514	18,528	...	4,242
10	Fainkhandá ...	1,484	8,279	2,432	1,735	4,112	849	6,395	...	1,036
11	Tallá Salán ...	8,023	39,687	11,237	8,426	20,034	9,471	22,403	...	7,359
	Total	69,646	3,66,387	1,04,283	77,554	1,84,550	86,359	2,17,638	465	57,905

APPENDIX IV.

Statement showing the village statistics for Garhwal district as reported by the Patwáris—(concluded).

Serial number of pargana.	Name of pargana.	Other castes.	Number of ploughs.	Buffaloes.	Other cattle.	Sheep and goats.	Horses.	Asses.	Jubás and yáks.	Total of cattle viz., (columns 14 to 19).	Remarks.
1	2	12	13	14	15	16	17	18	19	20	21
1	Badhán	511	4,639	4,515	27,310	19,022	57	...	...	51,404	
2	Bárbasyún	191	8,240	5,216	36,382	20,617	126	...	...	62,341	
3	Chándpur	325	5,835	5,108	33,280	25,060	98	...	...	64,155	
4	Chauandkot	421	3,015	2,385	18,382	14,107	81	...	...	35,015	
5	Devalgarb	360	4,917	3,738	23,064	17,663	70	...	...	45,455	
6	Dasauli	125	1,743	1,657	12,673	8,775	47	...	...	23,152	
7	Gangá Salán	576	7,986	2,945	63,723	34,026	142	...	...	1,00,836	
8	Malla Salán	491	7,175	6,607	40,192	20,773	106	...	...	67,678	
9	Nágpur	556	6,842	6,824	37,650	33,106	93	...	...	77,673	
10	Painkhanda	...	783	424	4,175	15,081	240	95	125	20,740	
11	Talla Salán	464	6,417	4,611	54,800	23,774	170	...	...	83,355	
	Total	4,020	58,392	44,030	3,53,060	2,33,264	1,230	95	125	6,31,804	

E. K. PAUW, C.S.,

In charge of the Settlement.

Comparative Statement of demand

Name of pargana.	Name of patti.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
							CADASTRALLY
Badlián.	Kapiri ...	118 8 0	137 15 0	154 9 0	193 6 0	236 0 0	258 0 0
	Karākot ...	393 2 0	424 10 3	448 11 0	541 7 0	612 0 0	679 0 0
	Khansar ...	31 0 0	43 5 6	42 11 0	40 14 0	51 0 0	56 0 0
	Pindarwār ...	1,303 5 0	1,535 15 0	1,679 8 0	2,142 1 0	2,369 1 0	2,539 0 0
	Total of pargana.	1,845 15 0	2,141 13 9	2,325 7 0	2,917 12 0	3,268 1 0	3,532 0 0
	Aswālsyūn ...	347 0 0	700 12 0	773 4 0	945 4 0	1,168 0 0	1,206 8 0
	Banelsyūn ...	325 12 0	456 2 0	519 6 0	632 5 0	914 0 0	940 1 0
	Bangarheyūn ...	201 4 0	208 12 0	312 10 0	377 2 0	466 0 0	466 0 0
	Gagwārsyūn ...	613 0 0	724 12 0	812 2 0	963 11 0	1,078 0 0	1,111 12 0
	Idwālsyūn ...	315 4 0	426 2 0	471 14 0	579 11 0	715 0 0	737 12 0
Bāwālsyūn.	Kandwālsyūn ...	100 4 0	115 12 0	128 12 0	145 11 0	193 0 0	208 8 0
	Kapholsyūn ...	255 12 0	291 0 0	345 10 0	402 9 0	538 0 0	559 12 0
	Khatsyūn ...	228 8 0	276 0 0	305 6 0	367 4 0	465 0 0	473 4 0
	Manyārsyūn ...	178 4 0	401 4 0	470 5 0	592 9 0	980 0 0	1,030 4 0
	Nāndālsyūn ...	407 0 0	486 4 0	509 8 0	600 8 0	589 0 0	613 0 0
	Paidūlsyūn ...	850 8 0	929 12 0	1,026 10 0	1,151 6 0	1,327 0 0	1,357 8 0
	Patwālsyūn ...	190 4 0	222 8 0	243 12 0	289 8 0	377 0 0	390 12 0

fixed at former and present settlements.

Settlements of—		Whether <i>khālsā gūnth, sadābart, muāfi</i> or <i>tee simple</i> .	Expiring demand.	New revenue.			Percentage of increase or decrease.
Sambat 1890.	Sambat 1896.			Initial revenue for first three years.	Intermediate revenue for second three years.	Final revenue.	
9	10	11	12	13	14	15	16
SURVEYED PATTIS.							
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
256 0 0	258 0 0	<i>Khālsā</i> ...	363 0 0	622 0 0	631 0 0	637 0 0	75.48
		<i>Gūnth</i> ...	264 8 0	400 0 0	409 0 0	409 0 0	54.54
		Total ...	627 8 0	1,022 0 0	1,040 0 0	1,046 0 0	66.6
686 0 0	689 0 0	<i>Khālsā</i> ...	766 0 0	1,056 0 0	1,056 0 0	1,056 0 0	37.86
		<i>Gūnth</i> ...	64 2 0	91 0 0	91 0 0	91 0 0	42.19
		Total ...	830 2 0	1,147 0 0	1,147 0 0	1,147 0 0	88.19
65 0 0	70 0 0	<i>Khālsā</i> ...	203 0 0	380 0 0	401 0 0	416 0 0	104.93
2,619 0 0	2,554 0 0	<i>Khālsā</i> ...	2,289 0 0	3,192 0 0	3,203 0 0	3,211 0 0	40.28
		<i>Gūnth</i> ...	133 15 0	194 0 0	194 0 0	194 0 0	44.78
		Total ...	2,422 15 0	3,386 0 0	3,397 0 0	3,405 0 0	40.53
		(<i>Khālsā</i> ...	3,621 0 0	5,250 0 0	5,291 0 0	5,320 0 0	46.92
		<i>Gūnth</i> ...	462 9 0	685 0 0	694 0 0	694 0 0	50.00
3,826 0 0	3,571 0 0	Total ...	4,083 9 0	5,935 0 0	5,985 0 0	6,014 0 0	47.27
1,225 8 0	1,242 0 0	<i>Khālsā</i> ...	2,431 0 0	3,444 0 0	3,457 0 0	3,457 0 0	42.20
956 0 0	1,008 4 0	<i>Khālsā</i> ...	1,814 0 0	2,819 0 0	2,859 0 0	2,880 0 0	58.76
		<i>Gūnth</i> ...	87 0 0	159 0 0	178 0 0	178 0 0	104.60
		Total ...	1,901 0 0	2,978 0 0	3,037 0 0	3,058 0 0	60.86
471 0 0	487 0 0	<i>Khālsā</i> ...	705 0 0	1,230 0 0	1,245 0 0	1,245 0 0	76.60
		<i>Gūnth</i> ...	60 8 0	72 0 0	72 0 0	72 0 0	18.33
		Total ...	765 8 0	1,302 0 0	1,317 0 0	1,317 0 0	72.03
1,115 0 0	1,121 0 0	<i>Khālsā</i> ...	1,309 0 0	2,354 0 0	2,365 0 0	2,380 0 0	81.61
		<i>Gūnth</i> ...	9 0 0	20 0 0	20 0 0	20 0 0	122.2
		Total ...	1,318 0 0	2,374 0 0	2,385 0 0	2,400 0 0	82.09
749 0 0	790 0 0	<i>Khālsā</i> ...	1,282 0 0	2,096 0 0	2,169 0 0	2,190 0 0	70.83
		<i>Gūnth</i> ...	36 10 0	36 0 0	36 0 0	36 0 0	-1.71
		<i>Sadabart</i> ...	17 0 0	29 0 0	29 0 0	29 0 0	70.69
		Total ...	1,335 10 0	2,161 0 0	2,234 0 0	2,255 0 0	68.79
214 0 0	214 0 0	<i>Khālsā</i> ...	433 0 0	696 1 0	699 1 0	699 1 0	61.43
		<i>Gūnth</i> ...	107 8 0	155 0 0	162 0 0	169 0 0	57.09
		<i>Muāfi</i> ...	15 15 0	15 15 0	15 15 0	15 15 0	...
		Total ...	556 7 0	867 0 0	877 0 0	884 0 0	58.99
577 0 0	605 0 0	<i>Khālsā</i> ...	904 0 0	1,540 0 0	1,579 0 0	1,579 0 0	74.67
		<i>Gūnth</i> ...	88 0 0	129 0 0	129 0 0	129 0 0	46.69
		Total ...	992 0 0	1,669 0 0	1,708 0 0	1,708 0 0	72.18
456 0 0	465 0 0	<i>Khālsā</i> ...	674 0 0	1,036 0 0	1,046 0 0	1,046 0 0	55.19
		<i>Gūnth</i> ...	52 0 0	88 0 0	88 0 0	88 0 0	69.23
		Total ...	726 0 0	1,124 0 0	1,134 0 0	1,134 0 0	56.20
1,027 0 0	1,072 0 0	<i>Khālsā</i> ...	2,286 0 0	3,482 0 0	3,522 0 0	3,570 0 0	56.17
		<i>Gūnth</i> ...	67 0 0	130 0 0	132 0 0	132 0 0	97.01
		Total ...	2,353 0 0	3,612 0 0	3,654 0 0	3,702 0 0	57.33
621 0 0	623 0 0	<i>Khālsā</i> ...	859 0 0	1,338 0 0	1,338 0 0	1,338 0 0	55.76
		<i>Gūnth</i> ...	120 8 0	203 0 0	203 0 0	203 0 0	68.3
		<i>Fee-simple</i> ...	2 0 0	2 0 0	2 0 0	2 0 0	...
		Total ...	981 8 0	1,543 0 0	1,543 0 0	1,543 0 0	57.19
1,865 0 0	1,866 0 0	<i>Khālsā</i> ...	1,647 0 0	2,661 0 0	2,691 0 0	2,691 0 0	63.39
398 0 0	388 0 0	<i>Khālsā</i> ...	527 0 0	833 0 0	850 0 0	850 0 0	61.29

Comparative Statement of demand

Name of pargana.	Name of patti.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
Bārahayūn.	Bāwatsyūn ...	Rs. a. p. 152 0 0	Rs. a. p. 174 12 0	Rs. a. p. 185 8 0	Rs. a. p. 228 12 0	Rs. a. p. 317 0 0	CADASTRALLY Rs. a. p. 317 8 0
	Sitonsyūn ...	477 8 0	596 8 0	642 8 0	672 4 0	983 0 0	1,018 4 0
	Total of the pargana.	4,642 4 0	6,100 4 0	6,738 3 0	7,948 8 0	10,110 0 0	10,430 13 0
	Chauthān ...	742 2 6	847 8 0	863 8 0	993 5 0	1,085 8 0	1,166 0 0
	Choprākot ...	1,133 10 9	1,197 12 0	1,189 4 0	1,362 13 0	1,550 12 0	1,641 0 0
	Dhājyūli ...	157 8 0	334 6 0	341 14 0	435 0 0	489 0 0	518 0 0
	Lohbā ...	1,067 12 0	1,223 12 0	1,334 7 0	1,655 15 0	1,754 0 0	1,919 0 0
	Rānigarh ...	119 8 0	147 11 0	159 11 0	203 0 0	238 0 0	251 0 0
	Sili ...	772 8 0	952 9 0	1,106 7 0	1,340 15 0	1,519 0 0	1,632 0 0
	Sirgūr ...	346 4 0	379 4 0	440 1 0	567 5 0	631 0 0	655 0 0
Taili ...	735 0 0	819 15 0	975 12 0	1,223 9 0	1,400 0 0	1,478 0 0	
Total of the pargana.	5,074 5 3	5,902 13 0	6,411 0 0	7,781 14 6	8,667 4 0	9,260 0 0	
Chaudkot.	Gurāsryūn ...	237 10 0	352 5 0	359 1 0	403 6 0	574 0 0	563 0 0
	Jaintolsyūn ...	350 0 0	333 10 0	333 4 0	422 4 0	458 0 0	467 4 0
	Kimgaddigād ...	318 0 0	363 0 0	404 13 0	469 6 0	633 0 0	573 8 0

fixed at former and present settlements—(continued).

settlements of—		Whether khālsā, gūnth, sādābart, mudfi or fee-simple.	Expiring demand.	New revenue.			Percentage of increase or decrease.
Sambat 1890.	Sambat 1896.			Initial revenue for first three years.	Intermediate revenue for second three years.	Final revenue.	
9	10	11	12	13	14	15	16
SURVEYED PATTIS—(continued).							
Rs. a. p. 323 0 0	Rs. a. p. 331 0 0	Khālsā ...	Rs. a. p. 391 0 0	Rs. a. p. 564 0 0	Rs. a. p. 577 0 0	Rs. a. p. 577 0 0	47.57
		Gūnth ...	93 0 0	128 0 0	128 0 0	128 0 0	37.63
		Total ...	484 0 0	692 0 0	705 0 0	705 0 0	45.66
986 0 0	1,046 0 0	Khālsā ...	1,354 0 0	2,144 0 0	2,164 0 0	2,176 0 0	60.71
		Gūnth ...	30 0 0	66 0 0	66 0 0	66 0 0	120.00
		Sadābart ...	322 0 0	480 0 0	480 0 0	480 0 0	49.07
		Total ...	1,706 0 0	2,690 0 0	2,710 0 0	2,722 0 0	59.55
		Khālsā ...	16,616 0 0	26,237 1 0	26,561 1 0	26,678 1 0	60.56
		Gūnth ...	751 2 0	1,186 0 0	1,214 0 0	1,221 0 0	62.58
		Sadābart ...	339 0 0	509 0 0	509 0 0	509 0 0	50.15
		Mudfi ...	15 15 0	15 15 0	15 15 0	15 15 0	...
		Fee-simple ...	2 0 0	2 0 0	2 0 0	2 0 0	...
10,483 8 0	10,758 4 0	Total ...	17,724 1 0	27,950 0 0	28,302 0 0	28,426 0 0	60.38
1,070 0 0	1,169 0 0	Khālsā ...	1,547 0 0	2,049 0 0	2,058 0 0	2,068 0 0	33.68
		Gūnth ...	1 10 0	2 0 0	2 0 0	2 0 0	23.07
		Total ...	1,548 10 0	2,051 0 0	2,060 0 0	2,070 0 0	33.63
1,720 0 0	1,537 8 0	Khālsā ...	2,012 0 0	3,012 0 0	3,047 0 0	3,056 0 0	51.89
		Gūnth ...	3 8 0	3 0 0	3 0 0	3 0 0	14.29
		Total ...	2,065 8 0	3,015 0 0	3,050 0 0	3,059 0 0	49.09
533 0 0	524 0 0	Khālsā ...	521 0 0	918 0 0	938 0 0	938 0 0	80.04
		Gūnth ...	20 0 0	40 0 0	50 0 0	57 0 0	185.00
		Total ...	541 0 0	958 0 0	988 0 0	995 0 0	83.92
1,306 8 0	1,859 0 0	Khālsā ...	2,059 8 0	2,872 0 0	2,957 0 0	3,015 0 0	46.38
		Gūnth ...	72 0 0	104 0 0	113 0 0	113 0 0	56.94
		Fee-simple ...	83 0 0	177 0 0	177 0 0	177 0 0	113.25
		Total ...	2,214 8 0	3,153 0 0	3,247 0 0	3,305 0 0	49.23
274 0 0	281 0 0	Khālsā ...	288 8 0	368 0 0	368 0 0	368 0 0	27.43
		Gūnth ...	6 8 0	9 0 0	9 0 0	9 0 0	33.3
		Total ...	295 0 0	377 0 0	377 0 0	377 0 0	27.80
1,645 0 0	1,579 8 0	Khālsā ...	1,497 8 0	2,231 0 0	2,248 0 0	2,248 0 0	50.10
		Gūnth ...	24 8 0	28 0 0	28 0 0	28 0 0	12.50
		Total ...	1,522 0 0	2,259 0 0	2,276 0 0	2,276 0 0	49.54
670 0 0	644 12 0	Khālsā ...	509 0 0	792 0 0	803 0 0	803 0 0	57.76
1,535 0 0	1,472 0 0	Khālsā ...	1,822 0 0	2,847 0 0	2,867 0 0	2,874 0 0	57.74
		Gūnth ...	61 0 0	99 0 0	99 0 0	99 0 0	62.29
		Total ...	1,983 0 0	2,946 0 0	2,966 0 0	2,973 0 0	57.89
		Khālsā ...	10,266 8 0	15,089 0 0	15,286 0 0	15,370 0 0	49.86
		Gūnth ...	189 2 0	285 0 0	304 0 0	311 0 0	64.55
		Fee-simple ...	83 0 0	177 0 0	177 0 0	177 0 0	113.25
9,353 8 0	9,066 12 0	Total ...	10,528 10 0	15,551 0 0	15,787 0 0	15,858 0 0	50.61
568 10 0	575 12 0	Khālsā ...	1,108 0 0	1,716 12 0	1,741 12 0	1,741 12 0	57.22
		Gūnth ...	53 12 0	93 4 0	93 4 0	93 4 0	72.2
		Total ...	1,161 12 0	1,810 0 0	1,835 0 0	1,835 0 0	57.92
502 0 0	454 4 0	Khālsā ...	678 0 0	982 0 0	982 0 0	982 0 0	44.84
613 0 0	617 0 0	Khālsā ...	807 0 0	1,379 0 0	1,379 0 0	1,379 0 0	70.88
		Gūnth ...	89 0 0	161 0 0	161 0 0	161 0 0	80.90
		Total ...	896 0 0	1,540 0 0	1,540 0 0	1,540 0 0	71.87

Comparative Statement of demand

Name of pargana.	Name of patti.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	CADASTRALLY Rs. a. p.
Chaudkot—(concluded).	Maundársyún ...	584 4 0	732 9 0	813 15 0	954 8 0	1,127 8 0	1,167 8 0
	Mawálsyún ...	576 8 0	590 6 0	648 8 0	719 14 0	874 0 0	847 4 0
	Pinglápkhá ...	179 0 0	234 15 0	248 14 0	254 6 0	307 0 0	310 12 0
	Bingwársyún ...	202 4 0	266 11 0	302 2 0	399 1 0	441 0 0	450 4 0
	Total of the pargana.	2,447 10 0	2,873 8 0	3,110 9 0	3,622 13 0	4,314 8 0	4,379 14 0
	Naohbansyún ...	24 8 0	160 12 0	182 4 0	227 7 0	317 0 0	350 0 0
	Bidolsyún ...	184 8 0	203 0 0	225 4 0	236 1 0	271 0 0	270 8 0
	Chalansyún ...	192 12 0	285 12 0	347 0 0	420 10 0	653 0 0	666 0 0
	Dhanpúr ...	564 8 0	692 10 0	868 0 0	1,049 9 0	1,203 0 0	1,226 4 0
	Total of the pargana.	1,791 13 0	2,547 6 0	2,988 2 0	3,649 13 0	4,504 8 0	4,681 8 0
Devalgarh.	Ajmir ...	620 0 0	682 5 0	755 10 0	902 8 0	1,120 4 0	1,182 4 0
	Dhángu Mallá ...	840 0 0	892 4 0	949 9 0	1,178 3 6	1,214 0 0	1,265 8 0
	Dhángu Tallá ...	872 0 0	923 0 0	979 11 0	1,141 0 0	1,242 12 0	1,302 8 0
	Karondú Pallá ...	95 0 0	166 12 0	185 4 6	241 7 0	311 0 0	319 4 0
	Karondú Wallá ...	285 0 0	314 12 0	322 0 3	422 2 6	514 0 0	534 12 0
	Langúr ...	748 8 0	780 0 0	856 0 0	1,146 4 0	1,188 0 0	1,331 0 0
	Total of the pargana.	1,791 13 0	2,547 6 0	2,988 2 0	3,649 13 0	4,504 8 0	4,681 8 0
	Udepúr Bichlá ...	553 13 0	657 4 0	773 5 0	1,076 9 0	1,336 3 0	1,406 0 0

fixed at former and present settlements—(continued).

Settlements of—	Whether <i>khálsá</i> , <i>gúnth</i> , <i>sadábart</i> , <i>muáfi</i> or fee simple.	Expiring demand.	New revenue.			Percentage of increase or decrease.
			Initial revenue for first three years.	Intermediate revenue for second three years.	Final revenue.	
Sambat 1890.	Sambat 1896.					
9	10	11	12	13	14	15
SURVEYED PATTIS—(continued).						
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1,138 0 0	1,163 8 0	<i>Khálsá</i> ...	2,396 0 0	3,388 0 0	3,388 0 0	3,388 0 0
		<i>Gúnth</i> ...	77 0 0	130 0 0	130 0 0	130 0 0
		Total ...	2,473 0 0	3,518 0 0	3,518 0 0	3,518 0 0
852 0 0	840 12 0	<i>Khálsá</i> ...	1,062 0 0	1,738 0 0	1,742 0 0	1,742 0 0
		<i>Gúnth</i> ...	81 12 0	138 0 0	138 0 0	138 0 0
		Total ...	1,143 12 0	1,876 0 0	1,880 0 0	1,880 0 0
315 0 0	312 0 0	<i>Khálsá</i> ...	429 0 0	608 0 0	608 0 0	608 0 0
		<i>Gúnth</i> ...	6 3 0	11 0 0	11 0 0	11 0 0
		Total ...	435 3 0	619 0 0	619 0 0	619 0 0
424 0 0	452 4 0	<i>Khálsá</i> ...	652 0 0	959 0 0	959 0 0	959 0 0
		{ <i>Khálsá</i> ...	7,132 0 0	10,770 12 0	10,799 12 0	10,799 12 0
		{ <i>Gúnth</i> ...	307 11 0	533 4 0	533 4 0	533 4 0
		Total ...	7,439 11 0	11,304 0 0	11,333 0 0	11,333 0 0
4,412 10 0	4,415 8 0	<i>Khálsá</i> ...	869 8 0	1,667 0 0	1,710 0 0	1,725 0 0
		<i>Gúnth</i> ...	4 0 0	6 0 0	6 0 0	6 0 0
		Total ...	873 8 0	1,673 0 0	1,716 0 0	1,731 0 0
266 0 0	286 0 0	<i>Khálsá</i> ...	368 0 0	602 0 0	602 0 0	602 0 0
654 0 0	651 14 0	<i>Khálsá</i> ...	1,249 0 0	2,057 0 0	2,081 0 0	2,086 0 0
		<i>Gúnth</i> ...	80 0 0	116 0 0	116 0 0	116 0 0
		Total ...	1,329 0 0	2,173 0 0	2,197 0 0	2,202 0 0
1,190 0 0	1,668 0 0	<i>Khálsá</i> ...	1,665 2 0	2,385 0 0	2,451 0 0	2,456 0 0
		<i>Gúnth</i> ...	91 8 0	157 0 0	157 0 0	157 0 0
		Total ...	1,756 10 0	2,542 0 0	2,608 0 0	2,613 0 0
525 0 0	639 0 0	<i>Khálsá</i> ...	998 2 0	1,675 0 0	1,691 0 0	1,691 0 0
		<i>Gúnth</i> ...	31 0 0	56 0 0	56 0 0	56 0 0
		Total ...	1,029 2 0	1,731 0 0	1,747 0 0	1,747 0 0
622 0 0	774 8 0	<i>Khálsá</i> ...	1,261 0 0	2,032 0 0	2,032 0 0	2,032 0 0
		<i>Gúnth</i> ...	154 0 0	258 0 0	258 0 0	258 0 0
		<i>Muáfi</i> ...	56 0 0	82 0 0	82 0 0	82 0 0
		Total ...	1,471 0 0	2,372 0 0	2,372 0 0	2,372 0 0
942 8 0	964 10 0	<i>Khálsá</i> ...	1,650 0 0	2,333 0 0	2,357 0 0	2,357 0 0
		<i>Gúnth</i> ...	96 2 0	95 0 0	95 0 0	95 0 0
		<i>Muáfi</i> ...	40 7 4	32 0 0	32 0 0	32 0 0
		Total ...	1,786 9 4	2,460 0 0	2,484 0 0	2,484 0 0
		{ <i>Khálsá</i> ...	8,060 12 0	12,761 0 0	12,924 0 0	12,949 0 0
		{ <i>Gúnth</i> ...	466 10 0	688 0 0	688 0 0	688 0 0
		{ <i>Muáfi</i> ...	96 7 4	114 0 0	114 0 0	114 0 0
		Total ...	8,613 13 4	13,553 0 0	13,726 0 0	13,751 0 0
4,527 12 0	5,395 8 0	<i>Khálsá</i> ...	1,712 0 0	2,580 0 0	2,606 0 0	2,606 0 0
1,189 0 0	1,174 0 7	Do. ...	1,918 0 0	2,783 0 0	2,798 0 0	2,798 0 0
1,259 0 0	1,273 0 0	Do. ...	1,267 0 0	1,907 0 0	1,938 0 0	1,941 0 0
1,312 0 0	1,278 0 0	Do. ...	546 0 0	947 0 0	972 0 0	972 0 0
333 0 0	333 0 0	Do. ...	599 0 0	921 0 0	923 0 0	923 0 0
552 0 0	545 0 0	Do. ...	2,090 0 0	3,332 0 0	3,403 0 0	3,430 0 0
1,363 0 0	1,389 0 0	<i>Gúnth</i> ...	76 0 0	113 0 0	113 0 0	113 0 0
		Total ...	2,166 0 0	3,445 0 0	3,516 0 0	3,543 0 0
1,450 0 0	1,446 0 0	<i>Khálsá</i> ...	2,232 0 0	3,313 0 0	3,366 0 0	3,389 0 0
		<i>Gúnth</i> ...	29 8 0	41 0 0	41 0 0	41 0 0
		Total ...	2,261 8 0	3,354 0 0	3,407 0 0	3,430 0 0

Comparative Statement of demand

Name of pargana.	Name of patti.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
Ganga Salán—(concluded).		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	Udépúr Mallá,	311 14 0	346 8 0	391 10 0	477 8 3	933 0 0	682 8 0
	Udépúr Tallá ...	653 12 0	720 6 0	843 1 0	999 13 0	1,249 0 0	1,398 0 0
	Total of the pargana.	4,979 15 0	5,483 3 0	6,056 3 6	7,585 7 3	9,108 3 0	9,421 12 0
	Bangársyún ...	334 0 0	324 6 0	387 0 0	560 4 0	598 0 0	639 0 0
	Dhaundiýálsyún,	321 0 0	307 2 0	406 3 0	470 4 0	547 0 0	566 0 0
	Gujrú ...	509 2 0	573 1 0	626 5 0	643 5 0	773 0 0	797 0 0
	Iriyákot ...	605 4 0	712 7 0	773 11 0	893 8 0	1,146 13 0	1,198 0 0
	Khátli ...	1,211 13 0	1,367 5 0	1,553 15 0	1,697 13 0	1,947 0 0	1,984 0 0
	Kolágád ...	62 1 0	82 11 0	122 0 0	158 12 0	252 0 0	263 4 0
Malla Salán.	Meldhár ...	175 0 0	208 4 0	234 6 0	246 0 0	267 0 0	273 0 0
	Sábli ...	1,022 0 0	1,160 1 0	1,317 10 0	1,586 12 0	1,773 0 0	1,939 0 0
	Saindhár ...	109 0 0	125 14 6	154 8 0	161 5 0	248 0 0	260 0 0
	Talain ...	273 8 0	366 6 0	407 0 0	447 12 0	569 8 0	600 8 0
	Total of the pargana.	4,622 12 0	5,287 9 6	5,982 10 0	6,885 11 0	8,121 5 0	8,519 12 0
	Nágpúr Bichlá,	1,065 4 0	1,251 8 0	1,382 6 0	1,661 4 0	1,960 2 0	1,999 12 0
	Nágpúr Tallá...	446 0 0	642 13 0	704 14 0	882 8 0	1,057 0 0	1,117 8 0
	Total of the pargana	1,511 4 0	1,894 5 0	2,087 4 0	2,543 12 0	3,017 2 0	3,117 4 0

fixed at former and present settlements—(continued).

settlements of—		Whether <i>khálsá, gúnth, sadabari, muáfi</i> or fee-simple.	Expiring demand.	New revenue.			Percentage of increase or decrease.
Sambat 1890.	Sambat 1896.			Initial revenue for first three years.	Intermediate revenue for second three years.	Final revenue.	
9	10	11	12	13	14	15	16
SURVEYED PATTIS—(continued).							
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
646 0 0	609 8 0	Khálsá ...	1,105 0 0	1,765 0 0	1,778 0 0	1,778 0 0	60·90
1,438 0 0	1,429 0 0	Khálsá ...	2,386 0 0	3,479 0 0	3,499 0 0	3,499 0 0	46·65
		Gúnth ...	112 0 0	192 0 0	205 0 0	205 0 0	83·04
		Total ...	2,498 0 0	3,671 0 0	3,704 0 0	3,704 0 0	48·28
		{ Khálsá ...	13,856 0 0	21,027 0 0	21,283 0 0	21,336 0 0	53·99
		{ Gúnth ...	217 8 0	346 0 0	359 0 0	359 0 0	64·98
9,542 0 0	9,476 8 7	Total ...	14,072 8 0	21,373 0 0	21,642 0 0	21,695 0 0	54·16
650 0 0	615 0 0	Khálsá ...	659 0 0	902 6 0	902 6 0	902 6 0	36·87
		Gúnth ...	0 10 0	0 10 0	0 10 0	0 10 0	...
		Total ...	659 10 0	903 0 0	903 0 0	903 0 0	36·82
588 0 0	596 0 0	Khálsá ...	699 8 0	929 0 0	940 0 0	940 0 0	34·33
		Gúnth ...	103 0 2	145 0 0	145 0 0	145 0 0	40·78
		Total ...	802 8 2	1,074 0 0	1,085 0 0	1,085 0 0	35·16
850 0 0	846 0 0	Khálsá ...	1,333 0 0	1,671 3 3	1,671 3 3	1,671 3 3	25·36
		Gúnth ...	1 12 9	1 12 9	1 12 9	1 12 9	...
		Total ...	1,334 12 9	1,673 0 0	1,673 0 0	1,673 0 0	25·32
1,239 0 0	1,282 8 0	Khálsá ...	2,360 0 0	3,809 15 11	3,885 15 11	3,890 15 11	64·88
		Gúnth ...	109 0 1	152 0 1	152 0 1	152 0 1	39·45
		Total ...	2,469 0 1	3,962 0 0	4,038 0 0	4,043 0 0	63·75
2,059 0 0	1,949 0 0	Khálsá ...	2,482 0 0	3,781 0 0	3,847 0 0	3,854 0 0	55·28
		Gúnth ...	8 0 0	8 0 0	8 0 0	8 0 0	...
		Total ...	2,490 0 0	3,789 0 0	3,855 0 0	3,862 0 0	55·10
277 0 0	269 0 0	Khálsá ...	498 0 0	869 0 0	898 0 0	915 0 0	83·73
		Gúnth ...	10 0 0	21 0 0	21 0 0	21 0 0	110·00
		Total ...	508 0 0	890 0 0	919 0 0	936 0 0	84·25
273 0 0	266 0 0	Khálsá ...	264 0 0	344 0 0	344 0 0	344 0 0	30·30
2,008 0 0	1,914 8 0	Do. ...	1,844 0 0	2,800 0 0	2,840 0 0	2,861 0 0	55·15
280 0 0	277 0 0	Do. ...	392 0 0	636 0 0	636 0 0	636 0 0	62·24
530 0 0	671 8 0	Do. ...	1,087 0 0	1,823 0 0	1,864 0 0	1,904 0 0	75·16
		Gúnth ...	74 0 0	105 0 0	105 0 0	105 0 0	41·89
		Total ...	1,161 0 0	1,928 0 0	1,969 0 0	2,009 0 0	73·04
		{ Khálsá ...	11,618 8 0	17,565 9 2	17,828 9 2	17,918 9 2	54·23
		{ Gúnth ...	306 7 0	433 6 10	433 6 10	433 6 10	41·50
8,823 0 0	8,686 8 0	Total ...	11,924 15 0	17,999 0 0	18,262 0 0	18,352 0 0	53·90
2,298 8 0	2,114 12 0	Khálsá ...	2,742 6 0	4,267 0 0	4,291 0 0	4,291 0 0	56·49
		Gúnth ...	224 12 0	323 0 0	323 0 0	323 0 0	43·5
		Total ...	2,967 2 0	4,590 0 0	4,614 0 0	4,614 0 0	55·51
1,072 12 0	1,236 4 0	Khálsá ...	2,439 0 0	3,429 0 0	3,443 0 0	3,443 0 0	41·16
		Gúnth ...	193 10 0	233 0 0	248 0 0	248 0 0	27·84
		Total ...	2,632 10 0	3,662 0 0	3,691 0 0	3,691 0 0	40·18
		{ Khálsá ...	5,181 6 0	7,696 0 0	7,734 0 0	7,734 0 0	49·28
		{ Gúnth ...	418 6 0	556 0 0	571 0 0	571 0 0	36·60
3,371 4 0	3,351 0 0	Total ...	5,599 12 0	8,252 0 0	8,305 0 0	8,305 0 0	48·30

Comparative Statement of demand

Name of pargana.	Name of pattā.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	CADASTRALLY Rs. a. p.
Talla Salān.	Badulpūr Mallā,	554 8 0	508 14 0	566 0 0	725 2 0	1,001 0 0	1,015 12 0
	Badalpur Tallā,	118 12 0	130 4 0	153 3 0	179 4 0	251 0 0	274 0 0
	Bhābar ...	...	...	...	2 0 0	5 0 0	5 4 0
	Bijlot Pallā ...	428 12 0	359 0 0	400 2 0	515 5 0	654 0 0	702 0 0
	Bijlot Wallā ...	243 4 0	395 0 0	444 6 0	521 7 0	714 0 0	745 0 0
	Būngi ...	687 0 0	780 8 0	871 14 0	987 11 0	1,162 0 0	1,154 0 0
	Kauriyā Pallā...	34 12 0	35 0 0	35 0 0	42 14 0	50 0 0	52 0 0
	Kauriyā Wallā,	256 4 0	256 0 0	256 0 0	284 14 0	357 0 0	376 0 0
	Painon ...	331 8 0	376 0 0	429 7 0	546 3 0	718 0 0	742 0 0
	Silā Mallā ...	605 0 0	687 4 0	705 15 0	913 12 0	1,154 0 0	1,170 8 0
	Silā Tallā ...	180 8 0	196 8 0	226 14 0	295 14 9	349 0 0	342 0 0
	Total of the pargana.	3,440 4 0	3,734 6 0	4,148 13 0	5,014 7 3	6,415 0 0	6,578 8 0
	Grand Total of the cadastrally surveyed pattis.	30,356 2 3	35,965 4 3	39,848 8 8	47,950 2 0	57,525 15 0	59,921 7 0

fixed at former and present settlements—(continued).

settlements of—		Whether <i>khālsā</i> , <i>gūnth</i> , <i>sadāhart</i> , <i>muāfi</i> or fee-simple.	Expiring demand.	New revenue.			Percentage of increase or decrease.
Sambat 1890.	Sambat 1896.			Initial revenue— for first three years.	Intermediate revenue— for second three years.	Final revenue.	
9	10	11	12	13	14	15	16
SURVEYED PATTIS—(concluded).							
Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1,066 0 0	1,138 12 0	<i>Khālsā</i> ...	1,879 8 0	2,985 0 0	3,019 0 0	3,033 0 0	61.36
		<i>Gūnth</i> ...	110 8 0	202 0 0	202 0 0	202 0 0	82.72
		Total ...	1,990 0 0	3,187 0 0	3,221 0 0	3,235 0 0	62.56
289 0 0	344 8 0	<i>Khālsā</i> ...	689 8 0	1,186 0 0	1,209 0 0	1,212 0 0	75.76
		<i>Gūnth</i> ...	32 8 0	48 0 0	48 0 0	48 0 0	46.87
		Total ...	722 0 0	1,234 0 0	1,257 0 0	1,260 0 0	74.52
6 0 0	126 0 0	<i>Khālsā</i> ...	179 0 0	280 0 0	280 0 0	280 0 0	56.98
		<i>Muāfi</i> ...	...	362 0 0	362 0 0	362 0 0	...
		Total ...	179 0 0	642 0 0	642 0 0	642 0 0	258.66
861 0 0	666 0 0	<i>Khālsā</i> ...	1,208 8 0	1,776 8 0	1,793 8 0	1,793 8 0	48.43
		<i>Gūnth</i> ...	47 8 0	71 8 0	71 8 0	71 8 0	51.6
		Total ...	1,256 0 0	1,848 0 0	1,865 0 0	1,865 0 0	48.49
558 0 0	775 14 0	<i>Khālsā</i> ...	1,154 8 0	1,521 4 9	1,521 4 9	1,521 4 9	31.80
		<i>Gūnth</i> ...	8 11 3	8 11 3	8 11 3	8 11 3	...
		Total ...	1,163 3 3	1,530 0 0	1,530 0 0	1,530 0 0	31.66
1,205 0 0	1,138 0 0	<i>Khālsā</i> ...	1,486 0 0	2,067 0 0	2,067 0 0	2,067 0 0	39.10
		<i>Gūnth</i> ...	8 0 0	8 0 0	8 0 0	8 0 0	...
		Total ...	1,494 0 0	2,075 0 0	2,075 0 0	2,075 0 0	38.8
60 0 0	86 0 0	<i>Khālsā</i> ...	154 0 0	235 0 0	244 0 0	244 0 0	58.44
337 0 0	383 0 0	Do. ...	522 8 0	998 0 0	1,015 0 0	1,015 0 0	94.25
838 0 0	824 0 0	Do. ...	1,898 10 0	3,268 0 0	3,395 0 0	3,412 0 0	79.67
		<i>Gūnth</i> ...	64 4 0	66 0 0	66 0 0	66 0 0	3.12
		Total ...	1,962 14 0	3,334 0 0	3,461 0 0	3,478 0 0	77.18
1,213 0 0	1,212 8 0	<i>Khālsā</i> ...	1,664 10 0	2,709 0 0	2,726 0 0	2,726 0 0	63.72
		<i>Gūnth</i> ...	11 12 0	13 0 0	13 0 0	13 0 0	8.3
		Total ...	1,676 6 0	2,722 0 0	2,739 0 0	2,739 0 0	63.42
307 0 0	354 0 0	<i>Khālsā</i> ...	462 0 0	860 0 0	884 0 0	890 0 0	92.85
		<i>Khālsā</i> ...	11,298 12 0	17,885 12 9	18,153 12 9	18,193 12 9	61.02
		<i>Gūnth</i> ...	283 3 3	417 3 3	417 3 3	417 3 3	47.35
		<i>Muāfi</i> ...	...	862 0 0	862 0 0	862 0 0	...
6,740 0 0	7,048 10 0	Total ...	11,581 15 3	18,665 0 0	18,933 0 0	18,973 0 0	63.81
		<i>Khālsā</i> ...	87,639 14 0	1,34,272 2 11	1,35,861 2 11	1,36,299 2 11	55.52
		<i>Gūnth</i> ...	3,392 10 3	5,129 14 1	5,213 14 1	5,227 14 1	51.08
		<i>Sadāhart</i> ...	339 0 0	509 0 0	509 0 0	509 0 0	50.15
		<i>Muāfi</i> ...	112 6 4	491 15 0	491 15 0	491 15 0	339.28
		Fee simple ...	85 0 0	179 0 0	179 0 0	179 0 0	110.59
60,879 10 0	61,769 10 7	Total ...	91,568 14 7	1,40,582 0 0	1,42,255 0 0	1,42,707 0 0	55.94

Comparative Statement of demand

Name of pargana.	Name of patti.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1885.
1	2	3	4	5	6	7	8
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
		462 8 0	555 7 6	623 3 0	778 5 0	834 0 0	871 0 0
		1,078 2 0	1,410 10 3	1,633 5 0	1,888 2 0	2,081 0 0	2,236 0 0
	
		1,540 10 0	1,966 1 9	2,256 8 0	2,666 7 0	2,915 0 0	3,107 0 0
	
	
	
	
		67 0 0	67 0 0	67 0 0	67 0 0	73 0 0	...
		43 0 0	34 12 0	36 2 0	47 7 0	55 0 0	56 0 0
	
		110 0 0	101 12 0	103 2 0	114 7 0	128 0 0	56 0 0
	
		2 6 0	5 0 0	5 4 0

fixed at former and present settlements—(continued).

settlements of—		Whether Khálsá, gúnth, sadábart, muáft or fee-simple.	Expiring demand.	New revenue.			Percentage of in- crease or decrease.		
Sambat 1890.	Sambat 1896.			Initial revenue for first three years.	Intermediate re- venue for second three years.	Final revenue.			
9	10	11	12	13	14	15	16		
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.			
			872 0 0	855 0 0	930 0 0	1,205 0 0	1,205 0 0	29 57	
			24 0 0	35 0 0	35 0 0	45 83	
			2,277 0 0	2,223 11 3	954 0 0	1,240 0 0	1,240 0 0	29 98	
			2,346 0 0	3,175 0 0	3,175 0 0	35 34	
			76 4 0	95 0 0	95 0 0	25 00	
			2,422 4 0	3,270 0 0	3,270 0 0	35 01	
			341 0 0	371 0 0	371 0 0	8 80	
			3,276 0 0	4,380 0 0	4,380 0 0	33 70	
			109 4 0	130 0 0	130 0 0	30 00	
			341 0 0	371 0 0	371 0 0	8 80	
			3,149 0 0	3,078 11 3	3,717 4 0	4,881 0 0	4,881 0 0	31 32	
			113 0 0	113 0 0	113 0 0	...	
			50 0 0	50 0 0	50 0 0	...	
			21 0 0	150 0 0	150 0 0	61 4 29	
			158 8 0	158 8 0	158 8 0	...	
			229 8 0	358 8 0	358 8 0	56 33	
			157 0 0	80 0 0	80 0 0	80 0 0	80 0 0	...	
			62 8 0	103 0 0	103 0 0	64 52	
			589 0 0	807 0 0	817 0 0	38 71	
			731 8 0	990 0 0	1,000 0 0	36 66	
			57 0 0	5 0 0	25 0 0	30 0 0	30 0 0	20 00	
			665 4 0	863 0 0	863 0 0	29 77	
			1,579 8 0	2,403 0 0	2,413 0 0	52 75	
			36 0 0	40 0 0	40 0 0	11 1	
			2,306 12 0	3,336 0 0	3,346 0 0	45 10	
			416 0 0	541 0 0	541 0 0	30 05	
			105 0 0	110 0 0	110 0 0	4 76	
			1,143 12 0	1,507 0 0	1,507 0 0	31 73	
			2,168 8 0	3,210 0 0	3,230 0 0	49 94	
			36 0 0	40 0 0	40 0 0	11 1	
			214 0 0	85 0 0	3,453 4 0	4,867 0 0	4,887 0 0	41 53	
			10 0 0	10 0 0	10 0 0	...	
			6 0 0	6 0 0	11 0 0	14 0 0	14 0 0	27 27	
			93 8 0	105 0 0	105 0 0	11 83	
			382 0 0	513 0 0	513 0 0	34 29	
			486 8 0	32 0 0	632 0 0	632 0 0	29 84

Comparative Statement of demand

Name of pargana.	Name of pattis.	Revenue at the previous					
		Sambat 1872.	Sambat 1873.	Sambat 1874.	Sambat 1877.	Sambat 1880.	Sambat 1895.
1	2	3	4	5	6	7	8
Nágpur - (concluded).	Káiphát Malli,	Rs. a. p. 219 12 0	Rs. a. p. 257 0 0	Rs. a. p. 270 14 0	Rs. a. p. 338 8 0	Rs. a. p. 377 0 0	NON-CADASTRALLY Rs. a. p. 397 4 0
	Káiphát Talli,	911 0 0	1,064 12 0	1,148 3 0	1,430 1 0	1,562 0 0	1,608 4 0
	Maikhandá ...	...	...	...	...	...	...
	Nágpur Mallá...	627 0 0	730 1 0	779 5 0	916 0 0	976 0 0	1,026 8 0
	Parkandí ...	...	...	...	...	...	...
	Urgan ...	...	...	...	...	...	...
	Total of the pargana.	1,757 12 0	2,051 13 0	2,198 6 0	2,686 15 0	2,920 0 0	3,037 4 0
Painkhandá	Painkhandá Mallá.	1,016 0 0	1,016 0 0	1,005 0 0	436 0 0	450 0 0	550 0 0
	Painkhandá Tallá	467 0 0	467 0 0	476 0 0	536 0 0	568 0 0	725 0 0
Total of the pargana.	1,483 0 0	1,483 0 0	1,481 0 0	972 0 0	1,018 0 0	1,275 0 0	
Total of the non-cadast- rally sur- veyed pat- tis.	4,891 6 0	4,602 10 9	6,039 0 0	6,439 13 0	6,981 0 0	7,475 4 0	
Grand Total of the district of Garhwal.	35,247 8 3	40,567 15 0	45,887 8 6	54,399 15 0	64,506 15 0	67,396 11 0	

fixed at former and present settlements—(concluded).

settlements of—		Whether khálsá, gúnth, sadábart, muáfi or fee-simple.	Expiring demand.	New revenue.			Percentage of in- crease or decrease.
Sambat 1890.	Sambat 1896.			Initial revenue for first three years.	Intermediate revenue for second three years.	Final revenue.	
9	10	11	12	13	14	15	
SURVEYED PATTIS—(concluded).			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Rs. a. p. 367 0 0	Rs. a. p. 366 0 0	Khálsá ...	388 0 0	507 0 0	507 0 0	507 0 0	30.67
		Gúnth ...	811 10 0	1,053 0 0	1,053 0 0	1,053 0 0	29.68
		Total ...	1,199 10 0	1,560 0 0	1,560 0 0	1,560 0 0	30.00
1,475 0 0	1,654 0 0	Khálsá ...	2,512 8 0	3,564 0 0	3,564 0 0	3,564 0 0	41.84
		Gúnth ...	250 5 0	304 0 0	304 0 0	304 0 0	21.60
		Total ...	2,762 13 0	3,868 0 0	3,868 0 0	3,868 0 0	39.99
...	...	Sadábart ...	209 0 0	264 0 0	264 0 0	264 0 0	26.32
		Gúnth ...	157 8 0	194 0 0	194 0 0	194 0 0	22.93
		Total ...	366 8 0	458 0 0	458 0 0	458 0 0	24.86
1,095 0 0	1,043 0 0	Khálsá ...	1,241 8 0	1,909 0 0	1,909 0 0	1,909 0 0	53.75
		Gúnth ...	451 4 0	631 0 0	631 0 0	631 0 0	39.91
		Total ...	1,692 12 0	2,540 0 0	2,540 0 0	2,540 0 0	50.03
...	...	Sadábart ...	550 8 0	751 0 0	751 0 0	751 0 0	36.36
		Gúnth ...	76 4 0	95 0 0	95 0 0	95 0 0	25.00
		Total ...	626 12 0	846 0 0	846 0 0	846 0 0	34.93
...	...	Gúnth ...	255 0 0	340 0 0	340 0 0	340 0 0	33.3
		Khálsá ...	4,153 0 0	5,994 0 0	5,994 0 0	5,994 0 0	44.33
		Gúnth ...	2,095 7 0	2,722 0 0	2,722 0 0	2,722 0 0	29.92
		Sadábart ...	1,141 8 0	1,528 0 0	1,528 0 0	1,528 0 0	33.83
2,943 0 0	3,069 0 0	Total ...	7,389 15 0	10,244 0 0	10,244 0 0	10,244 0 0	38.62
562 0 0	557 0 0	Khálsá ...	810 0 1	593 0 0	593 0 0	593 0 0	-26.79
		Gúnth ...	385 3 3	269 0 0	269 0 0	269 0 0	-30.13
		Total ...	1,195 3 4	862 0 0	862 0 0	862 0 0	-27.87
585 0 0	661 0 0	Khálsá ...	738 0 0	869 0 0	869 0 0	869 0 0	17.75
		Gúnth ...	594 6 0	796 0 0	796 0 0	796 0 0	34.01
		Total ...	1,332 6 0	1,665 0 0	1,665 0 0	1,665 0 0	25.00
		Khálsá ...	1,548 0 1	1,462 0 0	1,462 0 0	1,462 0 0	-5.5
		Gúnth ...	979 9 3	1,065 0 0	1,065 0 0	1,065 0 0	8.67
1,147 0 0	1,218 0 0	Total ...	2,527 9 4	2,527 0 0	2,527 0 0	2,527 0 0	...
		Khálsá ...	9,082 0 1	11,946 0 0	11,946 0 0	11,946 0 0	31.53
		Gúnth ...	4,319 0 3	5,424 0 0	5,424 0 0	5,424 0 0	25.59
		Sadábart ...	3,310 0 0	4,788 0 0	4,788 0 0	4,788 0 0	49.75
		Muáfi ...	36 0 0	40 0 0	40 0 0	40 0 0	11.1
		Fee-simple ...	693 8 0	852 8 0	852 8 0	852 8 0	22.94
7,453 0 0	7,450 11 3	Total ...	17,440 8 4	23,000 8 0	23,020 8 0	23,020 8 0	32.00
		Khálsá ...	96,721 14 1	1,46,218 2 11	1,47,807 2 11	1,48,245 2 11	53.27
		Gúnth ...	7,711 10 6	10,553 14 1	10,637 14 1	10,651 14 1	38.13
		Sadábart ...	3,649 0 0	5,247 0 0	5,267 0 0	5,267 0 0	44.34
		Muáfi ...	148 6 4	531 15 0	531 15 0	531 15 0	259.46
		Fee-simple ...	778 8 0	1,031 8 0	1,031 8 0	1,031 8 0	32.52
68,332 10 0	69,220 5 10	Total ...	109,009 6 11	1,63,582 8 0	1,65,275 8 0	1,65,727 8 0	52.03

Statement of the yearly demand on

Number.	Name of pargana.	Whether <i>khálsá</i> , <i>gúnth</i> <i>Sadábart</i> , <i>muáfi</i> or fee-simple.	Expiring demand.	New re		
				1893-94.	1894-95.	1895-96.
1	2	3	4	5	6	7
			Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
1	Chándpúr ...	Fee-simple ...	229 8 0	...	...	179 4 0
2	Bárahsyún ...	Ditto ...	113 0 0	...	...	58 8 0
3	Daseuli ...	<i>Khálsá</i> ...	105 0 0	...	...	55 0 0
		<i>Gúnth</i> ...	1,143 12 0	...	...	753 8 0
		<i>Sadábart</i> ...	2,168 8 0	...	...	1,605 0 0
		<i>Muáfi</i> ...	36 0 0	...	...	20 0 0
		Total ...	3,453 4 0	...	...	2,433 8 0
4	Dewalgarh ...	Fee-simple ...	10 0 0	...	...	5 0 0
5	Nágpur ...	<i>Khálsá</i> ...	4,153 0 0	...	...	2,997 0 0
		<i>Gúnth</i> ...	2,095 7 0	...	...	1,361 0 0
		<i>Sadábart</i> ...	1,141 8 0	...	...	764 0 0
		Total ...	7,389 15 0	...	...	5,122 0 0
6	Painkhandá ...	<i>Khálsá</i> ...	1,548 0 1	...	...	731 0 0
		<i>Gúnth</i> ...	979 9 3	...	...	532 8 0
		Total ...	2,527 9 4	...	...	1,263 8 0
	Grand Total of the Non-cadastrally surveyed portion.	<i>Khálsá</i> ...	9,092 0 1	...	...	5,973 0 0
		<i>Gúnth</i> ...	4,319 0 3	...	...	2,712 0 0
		<i>Sadábart</i> ...	3,310 0 0	...	...	2,369 0 0
		<i>Muáfi</i> ...	36 0 0	...	...	20 0 0
		Fee simple ...	693 8 0	...	...	426 4 0
		Total ...	17,440 8 4	...	...	11,500 4 0
	Grand Total of the district ...	<i>Khálsá</i> ...	96,721 14 1	26,237 1 0	37,007 13 0	91,613 0 0
		<i>Gúnth</i> ...	7,711 10 6	1,186 0 0	1,719 4 0	6,136 9 0
		<i>Sadábart</i> ...	3,649 0 0	509 0 0	509 0 0	2,878 0 0
		<i>Muáfi</i> ...	148 6 4	15 15 0	15 15 0	273 15 0
		Fee-simple ...	778 8 0	2 0 0	2 0 0	516 12 0
		Total ...	1,09,009 3 11	27,950 0 0	39,254 0 0	1,01,418 4 0

account of the present settlement—(concluded).

venue.	New re						Remarks.
	1896-97.	1897-98.	1898-99.	1899-1900.	1900-1901.	1901-1902.		1902-1903 and after.
8	9	10	11	12	13	14	15
Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
SURVEYED PORTION—(concluded).							
358 8 0	358 8 0	358 8 0	358 8 0	358 8 0	358 8 0	358 8 0	358 8 0
113 0 0	113 0 0	113 0 0	113 0 0	113 0 0	113 0 0	113 0 0	113 0 0
110 0 0	110 0 0	110 0 0	110 0 0	110 0 0	110 0 0	110 0 0	110 0 0
1,507 0 0	1,507 0 0	1,507 0 0	1,507 0 0	1,507 0 0	1,507 0 0	1,507 0 0	1,507 0 0
3,210 0 0	3,210 0 0	3,220 0 0	3,230 0 0	3,230 0 0	3,230 0 0	3,230 0 0	3,230 0 0
40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0
4,867 0 0	4,867 0 0	4,877 0 0	4,887 0 0	4,887 0 0	4,887 0 0	4,887 0 0	4,887 0 0
10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0	10 0 0
5,994 0 0	5,994 0 0	5,994 0 0	5,994 0 0	5,994 0 0	5,994 0 0	5,994 0 0	5,994 0 0
2,722 0 0	2,722 0 0	2,722 0 0	2,722 0 0	2,722 0 0	2,722 0 0	2,722 0 0	2,722 0 0
1,528 0 0	1,528 0 0	1,528 0 0	1,528 0 0	1,528 0 0	1,528 0 0	1,528 0 0	1,528 0 0
10,244 0 0	10,244 0 0	10,244 0 0	10,244 0 0	10,244 0 0	10,244 0 0	10,244 0 0	10,244 0 0
1,462 0 0	1,462 0 0	1,462 0 0	1,462 0 0	1,462 0 0	1,462 0 0	1,462 0 0	1,462 0 0
1,065 0 0	1,065 0 0	1,065 0 0	1,065 0 0	1,065 0 0	1,065 0 0	1,065 0 0	1,065 0 0
2,527 0 0	2,527 0 0	2,527 0 0	2,527 0 0	2,527 0 0	2,527 0 0	2,527 0 0	2,527 0 0
11,946 0 0	11,946 0 0	11,946 0 0	11,946 0 0	11,946 0 0	11,946 0 0	11,946 0 0	11,946 0 0
5,424 0 0	5,424 0 0	5,424 0 0	5,424 0 0	5,424 0 0	5,424 0 0	5,424 0 0	5,424 0 0
4,738 0 0	4,738 0 0	4,748 0 0	4,758 0 0	4,758 0 0	4,758 0 0	4,758 0 0	4,758 0 0
40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0	40 0 0
852 8 0	852 8 0	852 8 0	852 8 0	852 8 0	852 8 0	852 8 0	852 8 0
23,000 8 0	23,000 8 0	23,010 8 0	23,020 8 0	23,020 8 0	23,020 8 0	23,020 8 0	23,020 8 0
1,46,542 2 11	1,46,571 2 11	1,47,189 2 11	1,47,924 2 11	1,47,924 2 11	1,48,084 10 11	1,48,245 2 11	1,48,245 2 11
10,581 14 1	10,581 14 1	10,609 14 1	10,644 14 1	10,644 14 1	10,648 6 1	10,651 14 1	10,651 14 1
5,247 0 0	5,247 0 0	5,257 0 0	5,267 0 0	5,267 0 0	5,267 0 0	5,267 0 0	5,267 0 0
531 15 0	531 15 0	531 15 0	531 15 0	531 15 0	531 15 0	531 15 0	531 15 0
1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0	1,031 8 0
1,63,934 8 0	1,63,963 8 0	1,64,619 8 0	1,65,399 8 0	1,65,399 8 0	1,65,563 8 0	1,65,727 8 0	1,65,727 8 0

APPENDIX VI.
Valuation statement (totals of Part VI, Assessment Statement) for the cadastrally surveyed portion of the district of Garhwál—(concluded).

Name of pargana.	Ithán.				Kashí.				Total.				Remarks.	
	Area.	Revenue at the accepted revenue rates for the circle.	Value of gross produce at estimated produce values for the circle.	Percentage of total revenue accepted rates to total value of gross produce.	Area.	Revenue at the accepted revenue rates for the circle.	Value of gross produce at estimated produce values for the circle.	Percentage of total revenue accepted rates to total value of gross produce.	Area.	Revenue at the accepted revenue rates for the circle.	Value of gross produce at estimated produce values for the circle.	Percentage of total revenue accepted rates to total value of gross produce.		
1	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Acres.	Rs. a. a.	Rs.		Acres.	Rs. a. a.	Rs.		Acres.	Rs. a. p.	Rs.			
Badhán	3300	86 14 5	2,225 94	3.91	8	0 3 3	404	...	8,179 4	6,011 6 6	1,49,231 07	4.02	4.03	
Bárahayún	5,964 8	1,302 8 11	39,095 20	3.94	2,256 1	400 13 8	11,395 67	3.62	50,806 1	28,517 3 7	7,08,157 73	4.04	4.01	
Chándpur	1,695 4	411 14 5	10,876 55	3.79	62 6	14 8 9	320 92	4.98	25,832 6	15,907 6 1	4,12,689 66	3.85	3.84	
Chaundkot	1,448 9	294 15 3	7,679 01	3.83	97 7	17 4 6	492 22	3.46	21,679 9	12,218 14 11	3,09,592 40	3.95	3.66	
Dawalgarh	736 7	185 4 2	4,698 91	3.94	11 0	1 7 11	25 98	3.85	20,732 3	13,991 4 8	3,62,614 69	3.87	3.60	
Gangá Salán	5,583 2	1,063 12 8	28,099 23	3.79	6,878 1	626 0 5	15,946 70	3.93	54,478 4	22,090 7 3	5,89,199 23	3.75	3.68	
Mallá Salán	1,540 3	361 14 8	9,377 29	3.86	136 7	32 0 6	686 88	4.66	29,234 2	18,485 9 4	4,74,095 30	3.89	3.89	
Nágpur	363 9	94 2 6	2,420 26	3.88	5 5	1 5 10	26 89	3.70	11,899 2	8,317 15 8	2,17,301 21	3.83	3.82	
Talá Salán	2,820 9	582 8 1	15,290 55	3.80	1,287 4	134 14 6	2,990 22	4.52	36,861 1	19,240 9 11	5,26,582 89	3.65	3.60	
Total of the dis- trict.	20,474 1	4,383 15 1	1,13,762 93	3.85	10,705 9	1,228 11 4	31,889 72	3.65	2,59,703 2	1,44,780 13 11	37,49,494 18	3.68	3.61	

Note.—(a) The difference of Rs. 16 between the figures in column 23 (total) of this appendix and those in column 7 (grand total) of Appendix VII is due to the fact that fractions of a rupee were discarded in the latter.
(b) The difference of Rs. 66 between the figures in column 24 (total) of this appendix and those in column 10 (grand total) of Appendix VII is due to the fact that fractions of a rupee were discarded in the latter; while for those fractions which amounted to more than half of a rupee, a whole rupee was added.

In charge of the Settlement.
E. K. PAUW, C.S.,

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement.

Rate per <i>bist</i> of the circle.	Class of soil.	Crop.	Yield	Value.	Rate per rupee.	Remarks.	
1	2	3	4	5	6	7	
Rs. a. p.			BABAHSYUN. Dons. Mds. Seers.	Rs.	Páthas. Seers.		
Class I.	Irrigated ... {	Rice ...	(55) 37 18½	49	18 or 30½		
		Spring crop ...	about ¼ of rice	10			
		Total ...		59			
	1st class ... {	Rice ...	(36) 24 21	32	18 or 30½	10 or 20	20 or 38½
		Wheat ...	(15) 28 32	24			
		Mandwá ...	(22) 16 36½	17½			
	In one year ...			73½ 2 = 36½			
	2nd class ... {	Jhangora ...	(17) 12 13	13	21 or 38½	20 or 39½	20 or 38½
		Barley ...	(10) 7 35	8			
		Mandwá ...	(16) 14 32	12½			
In one year ...			33½ 2 = 16½				
1 0 0	Ijrán ... {	Calculated to bear the crops estimated for 2nd class dry in 8 annas per <i>bist</i> class, but to lie waste two years out of every four: yearly value.		6½			
Kattil ...	1st year <i>till</i>	(8) 4 32	12½	10 or 16	16 or 34½		
	2nd year fallow	(7) 3½	7				
	3rd year <i>gahat</i>		19½				
	4th year fallow		5				
II	1st class ... {	Rice ...	(28) 19 3	24½	18 or 30½	10 or 20	20 or 38½
Wheat ...		(14) 11 8	22½				
Mandwá ...		(19) 14 24½	15½				
In one year ...			62½ 2 = 31½				
0 14 0	2nd class ...	Same as in last class ...		16			
	Ijrán ...	Same as in last class ...		6½			
	Kattil ...	Same as in last class ...		5			
III	Irrigated ...	Rice ...	(35) 23 33½	31½	18 or 30½		
0 12 3	1st class ... {	Rice ...	(24) 16 14	21½	18 or 30½	10 or 20	20 or 38½
Wheat ...		(12) 9 24	19½				
Mandwá ...		(17) 13 2½	13½				
In one year ...			54½ 2 = 27½				
	2nd class ...	Same as in the last class ...		16			
	Ijrán ...	Same as in the last class ...		6½			
	Kattil ...	Same as in the last class ...		5			
IV	Irrigated ...	Same as in first class ...		59			
0 12 0	1st class ... {	Rice ...	(24) 16 14	21½	18 or 30½	10 or 20	20 or 38½
		Wheat ...	(11½) 9 8	18½			
		Mandwá ...	(16½) 12 27½	13½			
In one year ...			52½ 2 = 26½				
2nd class ... {	Jhangora ...	(16½) 11 38½	12½	21 or 38½	20 or 39½	20 or 38½	
	Barley ...	(10) 7 35	8				
	Mandwá ...	(15½) 11 36½	12½				
In one year ...			32½ 2 = 16½				
	Ijrán ...	Same as in last class ...		6½			
	Kattil ...	Same as in last class ...		5			

APPENDIX VIA

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per bisi of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
Bs. a. p. Class V.	Irrigated ...	A. P. Same as in III or 12 3 class		Rs. 31½		
0 11 9	1st class ...	Rice ... Wheat ... Mandwá ...	Dons. Mds. seers (23) 15 26½ (11) 8 32 (15½) 12 3½	20½ 17½ 12½ 50½ 2 say 25½	Páthas. Seers. 18 or 30½ 10 or 20 20 or 38½	
	2nd class ...	Jhangora ... Barley ... Mandwá ...	(16) 11 24 (10) 7 35 (15½) 11 28½	12½ 8 12½ 32½ 2 say 16½	21 or 38½ 20 or 39½ 20 or 38½	
	Ijrán ...	Same as in last class ...		6½		
	Katli ...	Same as in last class ...		5		
VI	Irrigated ...	Same as in last class		31½		
0 11 6	1st class ...	Rice ... Wheat ... Mandwá ...	(22) 14 39½ (11) 8 32 (15½) 11 36½	19½ 17½ 12½ 49½ 2 say 24½	18 or 30½ 10 or 20 20 or 38½	
	2nd class ...	Jhangora ... Barley ... Mandwá ...	(16) 11 24 (10) 7 35 (15) 11 21½	12½ 8 12 32½ 2 = 16½	21 or 38½ 20 or 39½ 20 or 38½	
	Ijrán ...	Same as in last class ...		6½		
	Katli ...	Same as in last class ...		5		
VII	Irrigated ...	Rice ...	(45) 30 26½	40	18 or 30½	
0 11 3	1st class ...	Rice ... Wheat ... Mandwá ...	(21½) 14 25½ (10½) 8 24 (15½) 11 36½	19½ 17½ 12½ 46½ 2 = 24½	18 or 30½ 10 or 20 20 or 38½	
	2nd class ...	Same as in last class ...		16½		
	Ijrán ...	Same as in last class ...		6½		
	Katli ...	Same as in last class ...		5		
VIII	Irrigated ...	Rice ...	(40) 27 10	35½	18 or 30½	
0 11 0	1st class ...	Rice ... Wheat ... Mandwá ...	(21) 14 12½ (10½) 8 24 (15½) 11 28½	18½ 17½ 12½ 48½ 2 = 24½	18 or 30½ 10 or 20 20 or 38½	
	2nd class ...	Jhangora ... Barley ... Mandwá ...	(16) 11 24 (9½) 7 19½ (14) 11 30½	12½ 7½ 11½ 30½ or 31 31 2 = 15½	21 or 38½ 20 or 39½ 20 or 38½	
	Ijrán ...	Same as in last class ...		6½		
	Katli ...	Same as in last class ...		5		

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per bist of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.	
1	2	3	4	5	6	7	
Rs. a. p.				Rs.	Pāthas Seers.		
IX	Irrigated ...	As in	0-11-3 class.	40	...		
	1st class ...	Rice ...	(20) 18 25	17½	18 or 30½		
		Wheat ...	(10½) 8 16	16½	10 or 20		
		Mandwá ...	(15) 11 21½	12	20 or 38½		
		In one year ...	...	46½ 2 = 23½		
	0 10 9	2nd class ...	Same as in last class	15½	...		
		Ijrán ...	Same as in last class	6½	...		
		Katíl ...	Same as in last class	5	...		
	X	Irrigated ...	Same as in III or 0-12-3 class	...	31½	...	
		1st class ...	Rice ...	(19) 12 37½	16½	18 or 30½	
Wheat ...			(10) 8 0	16	10 or 20		
Mandwá ...			(15) 11 21½	12	20 or 38½		
		In one year ...	...	44½ 2 = 22½		
0 10 6		2nd class ...	Same as in last class	15½	...		
		Ijrán ...	Same as in last class	6½	...		
		Katíl ...	Same as in last class	5	...		
XI		Irrigated ...	Same as in III or 0-12-3 class	...	31½	...	
		1st class ...	Rice ...	(18) 12 10½	16	18 or 30½	
	Wheat ...		(10) 8 0	16	10 or 20		
	Mandwá ...		(15) 11 21½	12	20 or 38½		
		In one year ...	...	44 2 = 22		
	0 10 0	2nd class ...	Jhangora ...	(15) 10 35	11½	21 or 38½	
	Barley ...		(9½) 7 19½	7½	20 or 39½		
	Mandwá ...		(13½) 10 15½	10½	20 or 38½		
		In one year ...	...	29½ 2 say 14½		
		Ijrán ...	Same as in last class	6½	...		
	Katíl ...	Same as in last class	5	...			
XII	Irrigated ...	Same as in last class	...	31½	...		
	1st class ...	Rice ...	(17½) 12 31½	15½	18 or 30½		
		Wheat ...	(9½) 7 32	15½	10 or 20		
		Mandwá ...	(15) 11 21½	12	20 or 38½		
		In one year ...	...	43½ 2 say 21½		
	0 9 9	2nd class ...	Jhangora ...	(14½) 10 27½	11½	21 or 38½	
	Barley ...		(9½) 7 11½	7½	20 or 39½		
	Mandwá ...		(13) 9 39½	10½	20 or 38½		
		In one year ...	...	29½ 2 say 14½		
		Ijrán ...	Same as in last class	6½	...		
	Katíl ...	Same as in last class	5	...			
XIII	Irrigated ...	Rice ...	(40) 27 10	35½	18 or 30½		
	1st class ...	Rice ...	(17½) 11 36½	15½	18 or 30½		
		Wheat ...	(9½) 7 24	16½	10 or 20		
		Mandwá ...	(15) 11 21½	12	20 or 38½		
		In one year ...	...	42½ 2 say 21½		
	0 9 6	2nd class ...	Same as in last class	14½	...		
		Ijrán ...	Same as in last class	6½	...		
		Katíl ...	Same as in last class	5	...		

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per <i>bisot</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.	
1	2	3	4	5	6	7	
Rs. a. p.			Dons Mds. Seers.	Rs.	Pathas. Seers.		
XIV 0 9 3	Irrigated ...	Rice ...	(30) 20 17½	26⅔ 26⅔	18 or 30⅔		
	1st class ...	Rice ...	(17) 11 23¼	15½	18 or 30⅔		
		Wheat ...	(9½) 7 16	1½	10 or 20		
		Mandwá ...	(15) 11 21¼	12	20 or 38⅔		
	In one year ...	...	...	41½ 41½ 2 say 21		
	2nd class ...	Same as in last class	...	14½	...		
Ijrán ...	Same as in last class	...	6⅔	...			
Katíl ...	Same as in last class	...	5	...			
XV 0 9 0	Irrigated ...	Same as in class 111, 12-3 ans.	...	31½	...		
	1st class ...	Rice ...	(17) 11 23¼	15½	18 or 30⅔		
		Wheat ...	(9) 7 8	14⅔	10 or 20		
		Mandwá ...	(15) 11 21¼	12	20 or 38⅔		
	In one year ...	...	...	41½ 41½ 2 say 20½		
	2nd class ...	Jhangora ...	(14½) 10 20¼	11⅔	21 or 38⅔		
Barley ...		(9½) 7 11½	7½	20 or 39⅔			
Mandwá ...		(12½) 9 2½	10	20 or 38⅔			
In one year ...	...	...	28⅔ 28⅔ 2 say 14⅔			
Ijrán ...	Same as in last class	...	6⅔	...			
Katíl ...	Same as in last class	...	5	...			
XVI 0 8 9	Irrigated ...	Same as in last class	...	31½	...		
	1st class ...	Rice ...	(17) 11 23¼	15½	18 or 30⅔		
		Wheat ...	(8½) 6 32	13⅔	10 or 20		
		Mandwá ...	(15) 11 21¼	12	20 or 38⅔		
	In one year ...	...	...	40⅔ 40⅔ 2 say 20½		
	2nd class ...	Jhangora ...	(14½) 10 13¼	10⅔	21 or 38⅔		
Barley ...		(9) 7 3½	7½	20 or 39⅔			
Mandwá ...		(12½) 9 16¼	9½	20 or 38⅔			
In one year ...	...	...	27⅔ 27⅔ 2 = 13½			
Ijrán ...	Same as in last class	...	6⅔	...			
Katíl ...	Same as in last class	...	5	...			
XVII 0 8 6	Irrigated ...	Same as in last class	...	31½	...		
	1st class ...	Rice ...	(16½) 11 9½	14⅔	18 or 30⅔		
		Wheat ...	(8½) 6 32	13⅔	10 or 20		
		Mandwá ...	(15) 11 21¼	12	20 or 38⅔		
	In one year ...	...	...	40½ 40½ 2 say 20½		
	2nd class ...	Jhangora ...	(14) 10 6	10⅔	21 or 38⅔		
Barley ...		(9) 7 3½	7½	20 or 39⅔			
Mandwá ...		(12) 9 9	9½	20 or 38⅔			
In one year ...	...	...	27⅔ 27⅔ 2 say 13½			
Ijrán ...	Same as in last class	...	6⅔	...			
Katíl ...	Same as in last class	...	5	...			
XVIII 0 8 3	Irrigated ...	Same as in last class	...	31½	...		
	1st class ...	Same as in last class	...	20½	...		
		2nd class ...	Jhangora ...	(11½) 9 31¼	10½	21 or 38⅔	
			Barley ...	(9) 7 3½	7½	20 or 39⅔	
	Mandwá ...		(11½) 8 33½	9½	20 or 38⅔		
	In one year ...	...	...	26⅔ 26⅔ 2 say 13½		
Ijrán ...	Same as in last class	...	6⅔	...			
Katíl ...	Same as in last class	...	5	...			

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per <i>bist</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
Rs. a. p. XIX	Irrigated ...	Same as in last class			31½	...
	1st class ...	Rice ...	(16) 10 36	14½	18 or 30½ 10 or 20 20 or 38½	
		Wheat ...	(7½) 6 0	12		
		Mandwá ...	(14½) 11 5½	11½		
		In one year ...	...	say 37½ 37½ 2 = 18½	
	0 8 0	2nd class ...	Jhangora ...	(13½) 9 31½	10½	21 or 38½ 20 or 39½ 20 or 38½
Barley ...			(9) 7 3½	7½		
Mandwá ...			(11½) 8 33½	9½		
		In one year ...	...	26½ 26½ 2 say 13½	
	Ijrán ...	Half of second class dry ...		6½	...	
	Katíl ...	Same as in last class ...		5	...	
XX	Irrigated ...	Same as in last class			31½	...
	0 7 9	1st class ...	Rice ...	(15) 10 8½	13½	18 or 30½ 10 or 20 20 or 38½
			Wheat ...	(7½) 6 0	12	
			Mandwá ...	(14½) 10 38½	11½	
		In one year ...	...	36½ 36½ 2 say 18½	
	2nd class ...	Jhangora ...	(13) 9 17	9½	21 or 38½ 20 or 39½ 20 or 38½	
Barley ...		(8½) 6 27½	6½			
Mandwá ...		(11) 8 18½	8½			
	In one year ...	...	25½ 25½ 2 say 12½		
	Ijrán ...	Half of 2nd class		6½	...	
	Katíl ...	Same as in last class		5	...	
XXI	Irrigated ...	Same as in last class			31½	...
	0 7 6	1st class ...	Rice ...	(14½) 9 35½	12½	18 or 30½ 10 or 20 20 or 38½
			Wheat ...	(7) 5 24	11½	
			Mandwá ...	(14) 10 30½	11½	
		In one year ...	...	35½ 35½ 2 say 17½	
	2nd class ...	Jhangora ...	(13) 9 17	9½	21 or 38½ 20 or 39½ 20 or 38½	
Barley ...		(7½) 6 4½	6½			
Mandwá ...		(10½) 8 2½	8½			
	In one year ...	...	24½ 24½ 2 say 12½		
	Ijrán ...	Half of the 2nd class		6½	...	
	Katíl ...	Same as in last class		5	...	
XXII	Irrigated ...	Same as in last class			31½	...
	0 7 3	1st class ...	Rice ...	(14) 9 21½	12½	18 or 30½ 10 or 20 20 or 38½
			Wheat ...	(6½) 5 16	10½	
			Mandwá ...	(13½) 10 22½	11	
		In one year ...	...	34½ 34½ 2 say 17½	
	2nd class ...	Jhangora ...	(12½) 9 2½	9½	21 or 38½ 20 or 39½ 20 or 38½	
Barley ...		(7½) 5 30½	6			
Mandwá ...		(10½) 7 35½	8½			
	In one year ...	...	23½ 23½ 2 say 11½		

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per bhas of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
Rs. s. p.			Dons. Mds. Seers.	Rs.	Páthas. Seers.	
	<i>Ijrán</i> ...	Half of 2nd class dry	...	6	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XXIII	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	Rice ... Wheat ... <i>Mandwá</i> ...	(13½) 9 7½ (6½) 5 8 (13½) 10 15½	12 10½ 10½ 33½	18 or 30¾ 10 or 20 20 or 38½	
		In one year	...	$\frac{33\frac{1}{2}}{2} = 16\frac{3}{4}$		
0 7 0	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(12) 8 28 (7½) 5 36½ (10) 7 27½	9½ 6 8 23½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year	...	$\frac{23\frac{1}{2}}{2} = 11\frac{1}{4}$		
	<i>Ijrán</i> ...	Half of 2nd class dry	...	5½	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XXIV	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	Rice ... Wheat ... <i>Mandwá</i> ...	(13) 8 34½ (6) 4 32 (13½) 10 7½	11½ 9½ 10½ 31½	18 or 30¾ 10 or 20 20 or 38½	
		In one year	...	$\frac{31\frac{1}{2}}{2}$ say 15½		
0 6 9	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(12) 8 28 (7) 5 20½ (9½) 7 12½	9½ 5½ 7½ 22½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year	...	$\frac{22\frac{1}{2}}{2}$ say 11½		
	<i>Ijrán</i> ...	Half of 2nd class dry	...	Say 5½	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XV	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	Rice ... Wheat ... <i>Mandwá</i> ...	(13) 8 34½ (5½) 4 16 (13) 9 39½	11½ 8½ 10½ 30½	18 or 30¾ 10 or 20 20 or 38½	
		In one year	...	$\frac{30\frac{1}{2}}{2}$ say 15½		
0 6 6	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(11½) 8 13½ (6½) 5 4½ (9) 6 36½	8½ 5½ 7½ 21½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year	...	$\frac{21\frac{1}{2}}{2}$ say 10½		
	<i>Ijrán</i> ...	Half of 2nd class dry	...	5½	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XXVI	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	Rice ... Wheat ... <i>Mandwá</i> ...	(12) 8 20½ (5½) 4 8 (12½) 9 24½	11½ 8½ 10 29½	18 or 30¾ 10 or 20 20 or 38½	
		In one year	...	$\frac{29\frac{1}{2}}{2}$ say 14½		
0 6 3	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(11½) 8 6½ (6) 4 29 (8½) 6 21½	8½ 4½ 6½ 20½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year	...	$\frac{20\frac{1}{2}}{2}$ say 10½		

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per <i>bis</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
Rs. a. p.			Dons. Mds. Seers		Páthas. Seers.	
	<i>Ijrán</i> ...	Half of 2nd class ...	...	Say 5	...	
	<i>Katíl</i> ...	Same as in last class ...	...	5	..	
XXVII.	Irrigated ...	Same as in last class ...	...	31½	...	
	1st class ...	Rice ... (12)	8 7	10½	18 or 30½	
		Wheat ... (5)	4 0	8	10 or 20	
		<i>Mandwá</i> ... (12)	9 29	9½	20 or 38½	
		In one year ...		28½ 2 = 14½		
0 6 0	2nd class...	<i>Jhangora</i> ... (11)	7 39	8½	21 or 38½	
		Barley ... (5½)	4 13½	4½	20 or 39½	
		<i>Mandwá</i> ... (8½)	6 21½	6½	20 or 38½	
		In one year ...		19½ 2 = say 9½		
	<i>Ijrán</i> ...	Half of 2nd class ...	...	4½	...	
	<i>Katíl</i> ...	Same as in last class ...	...	5	...	
XXVIII	Irrigated ...	Same as in last class ...	...	31½	...	
	1st class ...	Rice ... (11½)	7 33½	10½	18 or 30½	
		Wheat ... (4½)	3 32	7½	10 or 20	
		<i>Mandwá</i> ... (12)	9 29	9½	20 or 38½	
		In one year ...		27½ 2 = say 13½		
0 5 9	2nd class...	<i>Jhangora</i> ... (10½)	7 24½	8	21 or 38½	
		Barley ... (5½)	4 5½	4½	20 or 39½	
		<i>Mandwá</i> ... (8½)	6 13½	6½	20 or 38½	
		In one year ...		18½ 2 = 9½		
	<i>Ijrán</i> ...	Half of 2nd class dry ...	...	4½	...	
	<i>Katíl</i> ...	Same as in last class ...	...	5	...	
XXIX	Irrigated ...	Same as in last class ...	...	31½	...	
	1st class ...	Rice ... (11)	7 19½	9½	18 or 30½	
		Wheat ... (4½)	3 24	7½	10 or 20	
		<i>Mandwá</i> ... (11½)	8 33½	9½	20 or 38½	
		In one year ...		26½ 2 = say 13½		
0 5 6	2nd class...	<i>Jhangora</i> ... (10)	7 10	7½	21 or 38½	
		Barley ... (5)	3 37½	4	20 or 39½	
		<i>Mandwá</i> ... (8)	6 6	6½	20 or 38½	
		In one year ...		18 2 = say 9		
	<i>Ijrán</i> ...	Half of 2nd class ...	...	4½	...	
	<i>Katíl</i> ...	Same as in last class ...	...	5	...	

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per <i>blast</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
Rs. & p.			Dons. Md. Seers.		Páthas. Seers.	
XXX	Irrigated ...	Same as in last class ...		31½	...	
	1st class ...	Rice ...	(11) 7 19½	9½	18 or 30½½	
		Wheat ...	(4½) 3 16	6½	10 or 20	
		Mandwá ...	(11½) 8 25½½	9	20 or 38½½	
		In one year ...		$\frac{25\frac{1}{2}}{2}$ say 12½		
	2nd class ...	Jhangora ...	(9½) 7 2½	7½	21 or 38½½	
		Barley ...	(4½) 3 21½	3½	20 or 39½	
		Mandwá ...	(8) 6 6	} 6½ or 6½	{ 20 or 38 16 or 34½	
		Or say gahat ...	(6½) 5 25½			
	In one year ...		$\frac{17\frac{1}{2}}{2} = 8\frac{1}{2}$			
Jjrán ...	Half of 2nd class dry ...		Say 4½	...		
Katíl ...	Same as in last class ...		5	...		
XXXI	Irrigated ...	Same as in last class ...		31½	...	
	1st class ...	Rice ...	(11) 7 19½	9½	18 or 30½½	
		Wheat ...	(4) 3 8	6½	10 or 20	
		Mandwá ...	(11) 8 18½	8½	20 or 38½½	
		In one year ...		$\frac{25}{2}$ say 12½		
	2nd class...	Jhangora ...	(9½) 6 35½	7½	21 or 30½½	
		Barley ...	(4) 3 6	3½	20 or 39½	
		Mandwá ...	(7½) 5 30½	} 6	{ 20 or 38½½ 16 or 34½	
		or say gahat ...	(6) 5 8½			
	In one year ...		$\frac{16\frac{1}{2}}{2}$ say 8½			
Ijrán ...	Half of 2nd class dry ...		4½	...		
Katíl ...	Same as in last class ...		5	...		
XXXII	Irrigated ...	Same as in last class ...		31½	...	
	1st class ...	Jhangora ...	(11) 7 39	8½	21 or 38½½	
		Wheat ...	(3½) 2 32	} 5½ {	10 or 20 20 or 39½ 20 or 38½½	
		or Barley ...	(7) 5 20½			
Mandwá ...		(10½) 8 2½				
In one year ...		$\frac{22\frac{1}{2}}{2}$ say 11½				

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per bisf of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupec.	Remarks.
1	2	3	4	5	6	7
			Dons. Mds. Seers.		Páthas. Seers.	
Bs. s. p.	2nd class ...	Same as in last class	...	8½	...	
	<i>Ijrán</i> ...	Half of 2nd class dry	...	4½	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XXXIII	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	<i>Jhangora</i> ... Wheat ... (or Barley ... <i>Mandwá</i> ...	(11) 7 39 (3) 2 16 } (6) 4 29 } (10) 7 27½	8½ 4½ 8 21½	21 or 38½ { 10 or 20 { 20 or 38½	
0 4 6	In one year ...	...	...	$\frac{21\frac{1}{2}}{2}$ — say 10½		
	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(9) 6 21 (4) 3 6 (7½) 5 22½	6½ 3½ 5½ 15½	21 or 38½ 20 or 39½ 20 or 38½	
	In one year ...	...	...	$\frac{15\frac{1}{2}}{2}$ = say 8		
	<i>Ijrán</i> ...	Half of 2nd class	...	4	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	
XXXIV	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	<i>Jhangora</i> ... Wheat ... (or Barley ... <i>Mardwá</i> ...	(11) 7 39 (3) 2 16 } (6) 4 29 } (9) 6 36½	8½ 4½ 7½ 20½	21 or 38½ { 10 or 20 { 20 or 38½	
	In one year ...	...	...	$\frac{20\frac{1}{2}}{2}$ = say 10½		
0 4 3	2nd class ...	<i>Jhangora</i> ... Barley ... <i>Mandwá</i> ...	(8½) 6 13½ (3½) 2 30½ (7) 5 15½	6½ 2½ 5½ 15½	21 or 38½ 20 or 39½ 20 or 38½	
	In one year ...	...	...	$\frac{15\frac{1}{2}}{2}$ = say 7½		
	<i>Ijrán</i> ...	Half of 2nd class	...	3½	...	
	<i>Katíl</i> ...	Same as in last class	...	5	...	

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Rate per <i>bist</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
			Dons. Mds. Seers.		Páthas, Seers.	
Bs. a. p.						
XXXIV	Irrigated ...	Same as in last class	...	31½		
	1st class ...	Rice ... (8) 5 18 (or <i>Jhangora</i> ... (10) 7 10) Wheat ... (3) 2 16 (or Barley ... (6) 4 29) <i>Mandwá</i> ... (9) 6 36½		7½ or 7½ 4½ 7½ 19½	{ 18 or 30½ 21 or 38½ 10 or 20 20 or 39½	
0 4 0	...	In one year ...	...	$\frac{19½}{2} = \text{say } 9½$	20 or 38½	
	2nd class ...	<i>Jhangora</i> ... (8½) 6 6½ Barley ... (3½) 2 30½ <i>Mandwá</i> ... (7) 5 15½ (or <i>gahat</i> ... (6) 5 8½)		6½ 2½ 6 or 5½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year ...	...	$\frac{15}{2} = \text{say } 7½$		
	<i>Ijrán</i> ...	Half of 2nd class dry	...	3½	...	
	<i>Kattil</i> ...	Same as in last class	...	5	...	
XXXVI	Irrigated ..	Same as in last class	...	31½	...	
	1st class ...	<i>Jhangora</i> ... (9½) 6 35½ Wheat ... (2½) 2 0 <i>Mandwá</i> ... (8) 6 6		7½ 4 6½ 17½	21 or 38½ 10 or 20 20 or 38½	
0 3 6		In one year ..	...	$\frac{17½}{2} = \text{say } 8½$		
	2nd class ...	<i>Jhangora</i> ... (7½) 5 17½ Barley ... (3) 2 14½ <i>Mandwá</i> ... (6½) 4 39½		5½ 2½ 5½ 13½	21 or 38½ 20 or 39½ 20 or 38½	
		In one year ...	...	$\frac{13½}{2} = \text{say } 6¾$		
	<i>Ijrán</i> ...	Half of 2nd class dry	...	3½	...	
	<i>Kattil</i> ...	Same as in last class	...	5	...	
XXXVII	Irrigated ...	Same as in last class	...	31½	...	
	1st class ...	Same as in last class	...	8½	...	
	2nd class ...	<i>Jhangora</i> ... (6½) 4 28½ <i>Gahat</i> ... (4) 3 19		4½ 4 8½	21 or 38½ 16 or 34½	
0 3 0	...	In one year ...	...	$\frac{8½}{2} = \text{say } 4½$...	
	<i>Ijrán</i> ...	Half of 2nd class dry	...	2½	...	
	<i>Kattil</i> ...	Same as in last class	...	5	...	

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(continued).

Chaundkot.

In pargana Chaundkot the rates of valuation used were the same as in corresponding classes in Báráhsyún except in the case of a 2-anna 9 pies circle which did not exist in Báráhsyún. The rates of valuation for that circle were as follows :—

Rate per <i>bist</i> of the circle.	Class of soil.	Crops.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
0 2 9	Irrigated ...	Same as in class III or 0-12-3 per <i>bist</i> class in Báráhsyún.		31½	...	
	1st class ...	Same as in class XXXVII 3-anna class ...		8½	...	
	2nd class ... {	<i>Jhangora</i> ...	Dons. mds. srs. (6) 4 14	4½	21 or 38½	
		<i>Gahat</i> ...	(3½) 3 1½	3½	16 or 34½	
		In one year ...	...	8½ 2 say 4	...	
	<i>Ijrán</i> ...	Half of 2nd class dry ...		2	...	
	<i>Katíl</i> ...	Same as in Báráhsyún ...		5	...	

Malla Salán.

In Malla Salán the rates of valuation were the same as in corresponding classes in Báráhsyún. There was a 13-anna circle in Malla Salán which did not exist in Báráhsyún. The rates of valuation applied to this circle were the same as those in the 12-anna circle of Báráhsyún.

Tallá Salán.

The rates of valuation applied in this pargana were the same as applied to corresponding circles in Báráhsyún for 1st class and 2nd class dry and *ijrán*. The rates for irrigated land and *katíl* were different for this pargana. They were as follows for all circles :—

Rate per <i>bist</i> of the circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
	Irrigated ...	<i>Dhán</i> ...	(40) 27½	35½	18 or 30½	
		Wheat ...	(8) 6½	12½	10 or 20	
	<i>Katíl</i> ...	<i>Barley</i> ...	(7½) 5 30½	6	20 or 30½	
		<i>Mandwá</i> ...	(10) 7 27½	8	20 or 38½	
		<i>Jhangora</i> ...	(12) 8 28	9½	21 or 38½	
		In one year ...	...	23½ 10 say 2½	...	

Ganga Salán and Dewalgarh.

The rates of valuation were the same as in Tallá Salán.

APPENDIX VIA.

Outturn of the various classes of land adopted in the valuation statement—(concluded).

Badhán, Cháandpur and Nágpur.

In these parganas the rates of valuation were those as in Talla Salán, except in the case of *katil*, for which the Bárahsyún rates were used.

The Bhábar.

Name of circle.	Class of soil.	Crop.	Yield.	Value.	Rate per rupee.	Remarks.
1	2	3	4	5	6	7
			Mds. per acre.	Rs.	Seers.	
Mawákot Circle.	Irrigated, 1st class.	Rice ...	12½	20½	25	
		Wheat ...	3½	6½	20	
		<i>Lai</i> ...	9½	25¼	15	
				52½	30	
		Average yearly produce ...		26½		
Irrigated, 2nd class.	Produce in three years per acre ...		52½			Ordinary rotation as in 1st class, followed by a year's fallow on the average.
	Average yearly produce ...		17½		...	
Jhirna Circle.	Irrigated, 1st class.	Tobacco ...	25½	25½	40	
		Maize ...	9½	19½	20	
		Wheat ...	4½	9½	20	
		Cotton ...	3½	16	20	
		Three years of each ...		70½		
		Average yearly produce in the rotation of eight years ...		211½		
				26½		
	Irrigated, 2nd class.	Tobacco ...	25½	25½	40	Tobacco for three years followed by cotton and wheat for three years.
		Cotton ...	2½	12½	8	
		Wheat ...	3½	6½	20	
	Three years of each ...		44½			
	Average yearly produce in eight years ...		133½			
			16½			
Dry, 1st class.	Tobacco ...	25½	25½	40	Tobacco for three years followed by wheat and cotton alternating with fallow.	
	In three years ...		76½			
	Wheat ...	4½	9½	20		
	Cotton ...	3½	16	8		
	Two crops ...		25½			
	Total in seven years ...		51½			
	Average yearly produce ...		128			
			16½			
Dry 2nd, class.	Tobacco ...	25½	25½	40	Cotton and wheat alternately with a year's fallow after each crop of cotton.	
	Average yearly produce ...		12½			
	Wheat ...	4½	9½	20		
	Cotton ...	3½	16	8		
			25½			
	Average yearly produce ...		12½			
Dry, 3rd class.	Wheat ...	3½	6½	20	A crop of wheat on the average every second year.	
	Average yearly produce ...		3½			
Báhbhadrapur Circle.	Irrigated, 1st class.	Rice ...	12½	20½	25	
		Wheat ...	6½	12½	20	
		<i>Lai</i> ...	9½	25¼	15	
		<i>Ganárá</i> ...	4½	6½	30	
				65½		
		Average yearly produce ...		32½		
Irrigated, 2nd class.	In three years ...		65½		The above, with one year's fallow intermitted.	
	Average yearly produce ...		21½			

Totals of the Circle

Name of pargana.	Names of pattis occurring in the circle.	Name of circle.	Assessable area.			Revenue at the accepted revenue rates for the circle.	Incidence of column 7 on cultivated area.
			Present cultivated area.	Present area of new fallow.	Total of columns 4 and 5.		
1	2	3	4	5	6	7	8
			Acres.	Acres	Acres.	Rs.	Rs. a. p.
Badhan ...	Kapiri, Karakot, Khansar, and Pindarwar.	I.—Badhan circ'e, 8 as. per bisi.	4,184.4	288.4	4,472.8	2,884	0 11 0
Ditto ...	Karakot and Pindarwar ...	II. Pindar circle, 10 as. per bisi.	3,634.1	72.5	3,706.6	3,125	0 13 9
		Total of the pargana ...	7,818.5	360.9	8,179.4	6,009	0 12 4
Barahsyun ...	Gagwarsyun, Kapholsyun, and Nandalsyun.	I.—1 Re. per bisi. ...	233.4	11.0	244.4	366	1 8 1
Ditto ...	Gagwarsyun ...	II.—14 as. per bisi ...	251.4	...	251.4	293	1 2 8
Ditto ...	Gagwarsyun and Sitonsyun ...	III.—12 as. 3 p. per bisi	498.6	44.2	542.8	530	1 1 0
Ditto ...	Gagwarsyun, Idwalsyun, Nandalsyun, Paidulsyun, and Sitonsyun.	IV.—12 as. per bisi. ...	584.9	36.4	621.3	644	1 1 7
Ditto ...	Gagwarsyun and Paidulsyun ...	V.—11 as. 9 p. per bisi. ...	458.6	12.1	470.7	470	1 0 5
Ditto ...	Aswalsyun, Gagwarsyun and Paidulsyun.	VI.—11 as. 6 p. per bisi.	533.9	10.7	544.6	501	0 15 0
Ditto ...	Paidulsyun and Sitonsyun ...	VII.—11 as. 3 p. per bisi.	973.7	49.3	1,023.0	911	0 15 0
Ditto ...	Aswalsyun, Nandalsyun and Paidulsyun.	VIII.—11 as. per bisi. ...	450.8	28.2	479.0	428	0 15 2
Ditto ...	Gagwarsyun, Paidulsyun and Sitonsyun.	IX.—10 as. 9 p. per bisi.	292.6	26.1	318.7	270	0 14 9
Ditto ...	Gagwarsyun, Idwalsyun, Kapholsyun, Nandalsyun, Paidulsyun and Sitonsyun.	X.—10 as. 6 p. per bisi. ...	1,297.6	74.5	1,372.1	1,170	0 14 5
Ditto ...	Aswalsyun, Gagwarsyun, Idwalsyun, Kandwalsyun, Nandalsyun, Paidulsyun, Rawatsyun and Sitonsyun.	XI.—10 as. per bisi. ...	1,648.3	94.2	1,742.5	1,384	0 13 5
Ditto ...	Nandalsyun and Rawatsyun ...	XII.—9 as. 9 p. per bisi.	144.2	13.9	158.1	128	0 14 2
Ditto ...	Banelsyun, Kandwalsyun, Kapholsyun, Nandalsyun, Paidulsyun, Rawatsyun and Sitonsyun.	XIII.—9 as. 6 p. per bisi.	1,038.6	87.4	1,126.0	845	0 13 0
Ditto ...	Kandwalsyun and Sitonsyun ...	XIV.—9 as. 3 p. per bisi.	709.0	121.4	830.4	567	0 12 10
Ditto ...	Aswalsyun, Banelsyun, Bangarhsyun, Idwalsyun, Kapholsyun, Kandwalsyun, Nandalsyun, Paidulsyun and Sitonsyun.	XV.—9 as. per bisi. ...	2,469.2	226.4	2,695.6	1,869	0 12 1
Ditto ...	Aswalsyun, Gagwarsyun, Kandwalsyun and Nandalsyun.	XVI.—8 as. 9 p. per bisi.	959.9	115.5	1,075.4	718	0 12 0
Ditto ...	Aswalsyun, Gagwarsyun, Idwalsyun, Kapholsyun, Khatsyun, Manyarsyun, Nandalsyun and Sitonsyun.	XVII.—8 as. 6 p. per bisi.	2,232.1	211.4	2,443.5	1,689	0 12 1
Ditto ...	Banelsyun, Gagwarsyun, Idwalsyun, Kapholsyun and Khatysyun.	XVIII.—8 as. 3 p. per bisi.	998.1	160.5	1,158.6	716	0 11 6
Ditto ...	Aswalsyun, Banelsyun, Gagwarsyun, Idwalsyun, Kandwalsyun, Kapholsyun, Khatsyun, Manyarsyun, Nandalsyun, Patwalsyun and Sitonsyun.	XIX.—8 as. per bisi. ...	3,122.5	574.1	3,696.6	2,153	0 11 0
Ditto ...	Banelsyun, Kandwalsyun, Idwalsyun, Patwalsyun and Sitonsyun.	XX.—7 as. 9 p. per bisi. ...	1,775.5	249.2	2,024.7	1,151	0 10 4
Ditto ...	Aswalsyun, Banelsyun, Gagwarsyun, Idwalsyun, Kapholsyun, Khatsyun, Patwalsyun, Rawatsyun and Sitonsyun.	XXI.—7 as. 6 p. per bisi.	2,036.1	339.4	2,375.5	1,309	0 10 3
Ditto ...	Aswalsyun, Bangarhsyun, Gagwarsyun, Idwalsyun, Khatsyun, Kapholsyun, Patwalsyun, Rawatsyun and Sitonsyun.	XXII.—7 as. 3 p. per bisi.	1,757.7	278.7	2,036.4	1,073	0 9 9
Ditto ...	Aswalsyun, Banelsyun, Bangarhsyun, Gagwarsyun, Idwalsyun, Kandwalsyun, Kapholsyun, Khatsyun, Manyarsyun, Nandalsyun, Paidulsyun, Patwalsyun, Rawatsyun and Sitonsyun.	XXIII.—7 as. per bisi. ...	2,802.7	490.0	3,302.6	1,660	0 9 6

Assessment Registers.

Incidence of column 7 on assessable area (column 6).	Value of gross produce at the estimated produce values of the circle.	Former revenue (current demand).	Incidence of former revenue on cultivation at last settlement.	Proposed revenue.	Incidence of proposed revenue on present cultivated area.	Incidence of proposed revenue on assessable area. (column 6).	Percentage of proposed revenue on estimated value of gross produce. (column 10).	Percentage of increase or decrease on the revenue demand.	Percentage of proposed revenue to revenue at accepted revenue rates (column 7).	Remarks.
9	10	11	12	13	14	15	16	17	18	19
Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.				
0 10 4	75,386	1,828 6 0	0 15 6	2,904	0 11 1	0 10 4	3.85	58.86	100.79	
0 13 6	73,848	2,255 3 0	1 3 4	3,110	0 13 8	0 10 9	4.21	37.91	99.52	
0 11 9	1,49,234	4,083 9 0	1 1 9	6,014	0 12 4	0 11 9	4.03	47.27	100.08	
1 7 4	8,098	174 0 0	1 2 3	352	1 8 1	1 7 1	4.35	102.30	98.88	
1 2 8	6,614	201 0 0	0 15 11	293	1 2 8	1 2 8	4.43	...	100.	
0 15 7	12,189	497 0 0	0 13 6	530	1 1 0	0 15 7	4.35	6.64	100.	
1 0 7	15,093	353 0 0	1 0 1	657	1 2 0	1 0 11	4.27	86.12	102.02	
1 0 0	10,522	370 0 0	0 14 11	470	1 0 5	1 0 0	4.47	27.03	100.	
0 14 8	11,202	313 0 0	1 0 9	499	0 14 11	0 14 8	4.45	59.42	99.60	
0 14 3	20,610	315 0 0	0 15 1	911	0 15 0	0 14 3	4.42	189.21	100.	
0 14 4	9,671	342 8 0	1 0 4	429	0 15 3	0 14 4	4.44	25.11	100.02	
0 13 7	6,306	123 0 0	0 13 5	269	0 14 9	0 13 7	4.28	110.89	99.63	
0 13 8	26,249	688 0 0	0 14 6	1,170	0 14 5	0 13 8	4.46	70.07	100.00	
0 12 8	32,175	981 8 0	0 14 3	1,370	0 13 4	0 12 7	4.30	39.56	98.99	
0 12 11	2,998	83 0 0	0 13 11	122	0 13 6	0 12 4	4.07	46.99	95.31	
0 12 0	20,237	581 0 0	0 14 7	835	0 12 10	0 11 10	4.18	43.72	98.82	
0 10 11	13,747	379 0 0	1 0 0	558	0 12 7	0 10 9	4.06	47.23	98.41	
0 11 1	45,860	1,094 0 0	0 14 3	1,866	0 12 1	0 11 1	4.07	70.88	99.84	
0 10 8	17,598	455 6 0	0 12 10	718	0 12 0	0 10 8	4.08	57.67	100.	
0 11 1	41,618	997 0 0	0 13 6	1,687	0 12 1	0 11 1	4.06	69.21	99.88	
0 9 11	18,291	401 10 0	0 13 8	716	0 11 6	0 9 11	3.91	78.28	100.	
0 9 4	54,920	1,330 0 0	0 12 9	2,159	0 11 1	0 9 4	3.92	62.21	100.28	
0 9 1	29,379	691 8 0	0 12 0	1,151	0 10 4	0 9 1	3.92	66.47	100.	
0 8 10	33,158	882 0 0	0 12 8	1,308	0 10 3	0 8 10	3.94	48.30	99.92	
0 8 5	27,389	633 8 0	0 11 10	1,072	0 9 9	0 8 5	3.91	69.19	99.91	
0 8 1	42,638	1,024 0 0	0 12 6	1,655	0 9 6	0 8 0	3.88	61.62	99.70	

Totals of the Circle

Name of pargana.	Names of pattis occurring in the circle.	Name of circle.	Assessable area.			Revenue at the accepted revenue rates for the circle.	Incidence of column 7 on cultivated area.
			Present cultivated area.	Present area of new fallow.	Total of columns 4 and 5.		
1	2	3	4	5	6	7	8
			Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Bárahayún ...	Aswálsyún, Banelsyún, Idwálsyún, Kapholsyún, Khátsyún, Manyársyún, Ráwatsyún and Sitonsyún.	XXIV.—6 as. 9 p. per <i>bisi</i> .	1,977.8	419.0	2,396.8	1,114	0 9 0
Ditto ...	Aswálsyún, Banelsyún, Bangarhsyún, Idwálsyún, Kaudwálsyún, Kapholsyún, Khátsyún, Manyársyún, Ráwatsyún and Sitonsyún.	XXV.—6 as. 6 p. per <i>bisi</i> .	3,406.2	831.3	4,237.5	1,854	0 8 9
Ditto ...	Aswálsyún, Banelsyún, Bangarhsyún, Idwálsyún, Manyársyún and Ráwatsyún.	XXVI.—6 as. 3 p. per <i>bisi</i> .	1,420.0	140.8	1,560.8	715	0 8 1
Ditto ...	Aswálsyún, Banelsyún, Bangarhsyún, Gagwársyún, Idwálsyún, Manyársyún, Ráwatsyún and Sitonsyún.	XXVII.—6 as. per <i>bisi</i> ...	2,173.9	427.7	2,601.6	1,068	0 7 10
Ditto ...	Aswálsyún, Bangarhsyún and Manyársyún.	XXXVIII.—5 as. 9 p. per <i>bisi</i> .	723.6	104.3	827.9	340	0 7 6
Ditto ...	Banelsyún, Bangarhsyún, Kaudwálsyún, Kapholsyún, Khátsyún, Manyársyún	XXIX.—5 as. 6 p. per <i>bisi</i> .	1,257.4	310.9	1,568.3	570	0 7 3
Ditto ...	Banelsyún, Bangarhsyún, Manyársyún, Ráwatsyún.	XXX.—5 as. 3 p. per <i>bisi</i> .	976.0	208.8	1,184.8	378	0 6 2
Ditto ...	Banelsyún, Bangarhsyún, Kaudwálsyún, Manyársyún, Nándalsyún, Ráwatsyún.	XXXI.—5 as. per <i>bisi</i> ...	1,683.0	375.1	2,058.1	623	0 5 11
Ditto ...	Banelsyún, Manyársyún	XXXII.—4 as. 9 p. per <i>bisi</i> .	865.3	35.1	400.4	135	0 5 11
Ditto ...	Banelsyún, Bangarhsyún, Manyársyún.	XXXIII.—4 as. 6 p. per <i>bisi</i> .	1,170.6	240.9	1,411.5	419	0 5 8
Ditto ...	Manyársyún	XXXIV.—4 as. 3 p. per <i>bisi</i> .	333.5	92.5	426.0	117	0 5 7
Ditto ...	Banelsyún, Bangarhsyún, Kaudwálsyún, Manyársyún.	XXXV.—4 as. per <i>bisi</i> ...	750.1	189.3	939.4	233	0 5 0
Ditto ...	Gagwársyún	XXXVI.—3 as. 6 p. per <i>bisi</i> .	106.5	89.6	196.1	35	0 5 3
Ditto ...	Banelsyún, Bangarhsyún, Manyársyún.	XXXVII.—3 as. per <i>bisi</i> .	298.6	164.4	463.0	68	0 3 8
Total of the pargana ...			43,911.9	6,894.2	50,806.1	28,504	0 10 5
Chánpur ...	Ránigarh ...	I.—Ránigarh circle 8 as. per <i>bisi</i> .	359.4	16.4	375.8	252	0 11 3
Ditto ...	Chauthán, Choprákot, Dhajiyuli	II.—Chánpur western circle 7 as. per <i>bisi</i> .	6,474.6	660.1	7,134.7	3,627	0 9 0
Ditto ...	Ránigarh, Sili and Taili	III.—Chánpur eastern circle 8 as. per <i>bisi</i> .	10,432.7	717.4	11,150.1	7,156	0 11 0
Ditto ...	Lohba, Sili, Sirgur and Taili	IV.—Rámanga circle, 10 as. per <i>bisi</i> .	1,444.3	44.4	1,488.7	1,268	0 14 1
Ditto ...	Lohba	V.—Chauthán circle 8 as. per <i>bisi</i> .	2,882.7	281.0	3,163.7	1,915	0 10 8
Ditto ...	Chauthán	VI.—Bali and Nayúr circle, 8 as. per <i>bisi</i> .	1,851.3	112.2	1,963.5	1,215	0 10 6
Ditto ...	Choprákot	VII.—Pindar circle, 10 as. per <i>bisi</i> .	538.1	18.0	556.1	472	0 14 0
Ditto ...	Sirgur and Sili						
Total of the pargana ...			23,983.1	1,849.5	25,832.6	15,905	0 10 7
Chaundkot ...	Kimgaddigád	I.—12 as. 3 p. per <i>bisi</i> ...	460.4	6.4	466.8	491	1 1 1
Ditto ...	Jaintolsyún, Maundarsyún, Mawálsyún.	II.—12 as. per <i>bisi</i> ...	41.3	1.7	43.0	72	1 11 10
Ditto ...	Maundársyún	III.—10 as. 6 p. per <i>bisi</i> .	70.9	14.1	85.0	76	1 1 2
Ditto ...	Maundársyún, Mawálsyún	IV.—10 as. per <i>bisi</i> ...	51.8	2.2	54.0	56	1 1 4
Ditto ...	Maundársyún	V.—9 as. 3 p. per <i>bisi</i> ...	204.6	18.8	223.4	148	0 11 7

Assessment Registers—(continued).

Incidence of column 7 on assessable area (column 6).	Value of gross produce at the estimated produce values of the circle.	Former revenue (current demand).	Incidence of former revenue on cultivation at last settlement.	Proposed revenue.	Incidence of proposed revenue on present cultivated area.	Incidence of proposed revenue on assessable area. (column 6).	Percentage of proposed revenue on estimated value of gross produce (column 10).	Percentage of increase or decrease on the revenue demand.	Percentage of proposed revenue at accepted revenue rates (column 7).	Remarks.
Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.				
0 7 5	28,712	652 8 0	0 11 4	1,113	0 9 0	0 7 5	8.88	70.55	100.	
0 7 0	47,581	1,227 8 0	0 11 6	1,850	0 8 8	0 7 0	8.89	60.60	89.78	
0 7 4	18,201	459 0 0	0 8 10	715	0 8 1	0 7 4	3.93	55.77	100.	
0 6 7	27,564	628 8 0	0 10 11	1,068	0 7 10	0 6 7	3.88	70.06	100.	
0 6 7	8,777	261 0 0	0 10 0	340	0 7 6	0 6 7	3.87	30.27	100.	
0 5 10	14,904	331 8 0	0 11 1	568	0 7 3	0 5 10	3.81	71.31	99.65	
0 5 1	10,200	193 8 0	0 11 5	366	0 6 0	0 4 11	3.59	89.12	96.82	
0 4 10	16,837	399 8 0	0 10 6	622	0 5 11	0 4 10	3.69	55.66	99.84	
0 5 5	3,633	87 0 0	0 12 11	130	0 5 8	0 5 2	3.58	49.93	96.30	
0 4 8	11,567	281 0 0	0 10 3	418	0 5 9	0 4 9	3.61	48.75	99.76	
0 4 5	3,249	70 0 0	0 12 10	115	0 5 6	0 4 4	3.54	64.27	98.20	
0 4 0	7,022	173 0 0	0 10 9	224	0 4 9	0 3 10	3.19	29.48	96.14	
0 2 10	1,111	17 0 0	0 11 6	35	0 5 3	0 2 10	3.15	105.88	100	
0 2 4	2,354	32 8 0	0 8 0	65	0 3 6	0 2 3	2.72	100	95.59	
0 9 0	7,08,274	17,724 1 0	0 12 10	28,428	0 10 4	0 8 11	4.01	60.40	99.73	
0 10 9	6,672	201 0 0	1 0 3	254	0 11 4	0 10 10	3.78	26.37	100.79	
0 8 2	94,834	2,148 0 0	0 13 9	3,546	0 8 9	0 7 11	3.82	65.08	97.74	
0 10 3	1,88,658	4,517 0 0	0 15 1	7,155	0 11 0	0 10 3	3.71	158.40	99.99	
0 13 8	30,243	1,045 8 0	1 1 6	1,276	0 14 2	0 13 9	4.22	22.01	100.63	
0 9 8	49,436	1,489 10 0	0 12 7	1,932	0 10 9	0 9 9	3.91	29.66	100.89	
0 9 11	31,645	809 8 0	0 14 2	1,218	0 10 6	0 9 11	3.85	50.43	100.25	
0 13 7	11,176	318 0 0	1 1 5	477	0 14 2	0 13 9	4.27	150.00	101.06	
0 9 10	4,12,664	10,528 10 0	0 14 10	15,858	0 10 7	0 9 10	3.71	50.70	99.91	
1 0 10	10,867	244 0 0	0 15 9	472	1 0 5	1 0 2	4.34	93.44	96.13	
1 10 9	1,835	49 0 0	1 1 9	75	1 13 1	1 11 11	4.09	53.06	104.17	
0 14 4	1,606	60 0 0	1 3 3	76	1 1 2	0 14 4	4.73	26.67	100	
1 0 7	1,151	24 0 0	1 1 8	56	1 1 4	1 0 7	4.87	133.34	100	
0 10 7	3,623	128 0 0	0 12 2	148	0 11 7	0 10 7	4.09	1,562	100	

Totals of the circle

Name of pargana.	Names of pattis occurring in the circle.	Name of circle.	Assessable area.			Revenue at the accepted rates for the circle.		Incidence of column 7 on assessable area (column 6).
			Present cultivated area.	Present area of new fallow.	Total of columns 4 and 5.	Rs.	Rs. a. p.	
1	2	3	4	5	6	7	8	
			Acres.	Acres.	Acres.	Rs.	Rs. a. p.	
Chaundkot ...	Gurársyún, Maundársyún, Ringwársyún.	VI.—8 as. 6 p. per <i>bist</i> ..	867.2	44.0	911.2	657	0 12 1	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád Maundársyún, Mawálsyún, Pinglápákhá.	VII.—8 as. 3 p. per <i>bist</i> ...	1,171.9	47.9	1,219.8	848	0 11 7	
Ditto ...	Gurársyún, Kingaddigád, Maundársyún, Mawálsyún, Pinglápákhá Ringwársyún.	VIII.—8 as. per <i>bist</i> ...	2,052.5	93.1	2,145.6	1,423	0 11 1	
Ditto ...	Maundársyún, Mawálsyún, Pinglápákhá Ringwársyún.	IX.—7 as. 9 p. per <i>bist</i> ...	1,150.1	60.9	1,211.0	757	0 10 6	
Ditto ...	Gurársyún, Jaintolsyún, Maundársyún, Mawálsyún, Pinglápákhá, Ringwársyún.	X.—7 as. 6 p. per <i>bist</i> ...	1,818.3	60.3	1,878.6	1,152	0 10 2	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád, Maundársyún, Mawálsyún, Pinglápákhá.	XI.—7 as. 3 p. per <i>bist</i> ...	2,260.9	141.4	2,402.3	1,413	0 10 0	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád, Maundársyún, Mawálsyún, Pinglápákhá.	XII.—7 as. per <i>bist</i> ...	1,469.1	101.3	1,570.4	915	0 10 0	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád, Maundársyún, Ringwársyún.	XIII.—6 as. 9 p. per <i>bist</i> ,	1,463.7	129.0	1,592.7	816	0 8 11	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád Maundársyún, Ringwársyún, Mawálsyún.	XIV.—6 as. 6 p. per <i>bist</i> ,	1,726.4	159.8	1,886.2	968	0 9 0	
Ditto ...	Gurársyún, Jaintolsyún, Kingaddigád, Maundársyún, Mawálsyún.	XV.—6 as. 3 p. per <i>bist</i> ...	991.3	85.9	1,077.2	519	0 8 5	
Ditto ...	Gurársyún, Jaintolsyún, Mawálsyún, Maundársyún.	XVI.—6 as. per <i>bist</i> ...	1,379.5	182.5	1,562.0	705	0 8 2	
Ditto ...	Gurársyún, Jaintolsyún, Maundársyún, Mawálsyún, Ringwársyún.	XVII.—5 as. 9 p. per <i>bist</i> ,	392.0	20.9	412.9	181	0 7 5	
Ditto ...	Gurársyún, Maundársyún, Mawálsyún.	XVIII.—5 as. 6 p. per <i>bist</i> ,	792.8	176.5	969.3	354	0 7 2	
Ditto ...	Gurársyún, Kingaddigád ...	XIX.—5 as. 3 p. per <i>bist</i> ,	162.6	10.5	173.1	67	0 6 7	
Ditto ...	Gurársyún, Jaintolsyún, Maundársyún, Mawálsyún.	XX.—5 as. per <i>bist</i> ...	734.8	193.6	928.4	328	0 7 2	
Ditto ...	Maundársyún, Mawálsyún ...	XXI.—4 as. 9 p. per <i>bist</i> ,	288.1	26.3	314.4	108	0 6 0	
Ditto ...	Gurársyún, Maundársyún ...	XXII.—4 as. 6 p. per <i>bist</i> ,	115.3	21.8	137.1	48	0 6 8	
Ditto ...	Gurársyún ...	XXIII.—4 as. 3 p. per <i>bist</i> ,	29.0	8.7	37.7	10	0 5 6	
Ditto ...	Jaintolsyún, Maundársyún, Ringwársyún.	XXIV.—4 as. per <i>bist</i> ...	164.5	11.9	176.4	68	0 5 8	
Ditto ...	Maundársyún.	XXV.—2 as. 9 p. per <i>bist</i> ,	179.7	21.7	201.4	39	0 3 6	
	Total of the pargana ...	...	20,038.7	1,641.2	21,679.9	12,209	0 9 9	
Dewalgarh ...	Chalaneyún, Kathúlsyún ...	I.—Srinagar circle, 12 as. per <i>bist</i> .	687.4	35.2	722.6	704	1 0 5	
Ditto ...	Bachhansyún, Chalaneyún, Dhanpur, Kathúlsyún.	II.—Alaknanda circle, 10 as. per <i>bist</i> .	1,497.8	71.4	1,569.2	1,709	1 2 3	
Ditto ...	Bidolsyún, Chalaneyún, Ghurdorsyún, Kandársyún, Kathúlsyún.	III.—Kathúlsyún, and Nayár circle 8 as. per <i>bist</i> .	7,929.1	414.4	8,343.5	5,457	0 11 0	
Ditto ...	Bachhansyún, Bidolsyún, Chalaneyún, Dhanpur, Kandársyún, Kathúlsyún	IV.—Dewalgarh circle 7 as. per <i>bist</i> .	7,500.5	266.4	7,775.9	4,482	0 9 7	
Ditto ...	Dhanpur ...	V.—Dhanpur circle, 8 as. per <i>bist</i> .	1,395.9	47.5	1,443.4	1,133	0 13 0	
Ditto ...	Kandársyún ...	VI.—Chándpur circle, 7 as. per <i>bist</i> .	840.9	36.8	877.7	509	0 9 8	
	Total of the pargana ...	...	19,880.6	871.7	20,732.3	13,984	0 11 3	

Assessment Registers—(continued).

Incidence of column 7 on assessable area (column 6).	Value of gross produce at the estimated produce values of the circle.	Former revenue (current demand).	Incidence of former revenue on cultivation at last settlement.	Proposed revenue.	Incidence of proposed revenue on present cultivated area.	Incidence of proposed revenue on assessable area (column 6).	Percentage of proposed revenue on estimated value of gross produce (column 10).	Percentage of increase or decrease on the revenue demand.	Percentage of proposed revenue to accepted revenue rates (column 7).	Remarks.
9	10	11	12	13	14	15	16	17	18	19
Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.				
0 11 6	16,530	330 0 0	0 12 4	579	0 10 8	0 10 2	3.50	75.45	88.13	
0 11 1	21,655	400 0 0	0 13 8	777	0 10 7	0 10 2	3.59	58.57	91.63	
0 10 7	36,096	873 0 0	0 13 3	1,321	0 10 4	0 9 10	3.66	51.32	92.83	
0 10 0	19,272	454 0 0	0 12 1	676	0 9 5	0 8 11	3.51	48.90	89.30	
0 9 11	29,198	678 0 0	0 12 4	1,039	0 9 2	0 8 10	3.56	53.24	90.19	
0 9 5	35,717	953 11 0	0 12 7	1,332	0 9 5	0 8 10	3.73	39.67	94.26	
0 9 4	23,340	526 0 0	0 12 2	844	0 9 1	0 8 7	3.61	60.46	92.24	
0 8 2	20,940	530 0 0	0 11 11	772	0 8 5	0 7 9	3.64	45.66	94.61	
0 8 3	24,692	550 8 0	0 12 2	896	0 8 4	0 7 7	3.63	62.77	92.87	
0 7 8	18,253	375 0 0	0 12 1	486	0 7 10	0 7 3	3.67	29.60	93.64	
0 7 3	18,127	376 0 0	0 11 7	650	0 7 6	0 6 8	3.58	72.87	92.19	
0 7 0	4,660	83 8 0	0 10 2	168	0 6 10	0 6 6	3.61	101.20	92.82	
0 5 10	9,290	285 0 0	0 11 3	343	0 6 11	0 5 8	3.69	20.35	96.99	
0 6 2	1,763	30 0 0	0 12 8	64	0 6 3	0 5 11	3.63	113.33	95.52	
0 5 8	8,731	191 0 0	0 10 6	302	0 6 7	0 5 2	3.46	58.12	92.07	
0 8 6	2,836	104 0 0	0 9 11	113	0 6 3	0 5 9	3.98	8.65	104.63	
0 5 7	1,258	30 0 0	0 8 3	47	0 6 8	0 5 6	3.74	56.67	97.92	
0 4 3	272	9 0 0	1 5 3	10	0 5 6	0 4 3	3.67	11.12	100	
0 5 3	1,618	38 0 0	0 8 4	51	0 5 0	0 4 8	3.15	34.21	87.93	
0 3 1	1,131	28 0 0	0 11 9	36	0 3 2	0 2 10	3.18	28.70	92.31	
0 9 0	3,09,473	7,439 11 0	0 12 4	11,333	0 9 1	0 8 4	3.66	52.29	92.82	
0 15 7	16,138	674 13 10	1 2 9	691	1 0 1	0 15 4	4.36	2.37	98.15	
1 1 5	41,758	1,212 8 0	1 5 7	1,639	1 2 1	1 1 3	4.09	39.60	99.06	
0 10 6	1,42,072	3,377 10 0	0 14 8	5,366	0 10 10	0 10 3	3.78	58.88	98.38	
0 9 3	1,17,677	2,370 0 0	0 13 8	4,364	0 9 4	0 9 0	3.81	84.13	97.37	
0 12 7	31,835	692 2 0	1 2 0	1,135	0 13 0	0 12 7	3.56	64.02	100.18	
0 9 3	13,143	286 8 0	0 13 3	502	0 9 7	0 9 2	3.82	75.20	98.62	
0 10 9	3,62,623	8,613 9 10	1 0 0	13,751	0 11 1	0 10 7	3.79	59.64	98.26	
		8,613 9 10 Add 0 3 6 8,613 13 4	Revenue on <i>Sumári Gúntá</i> unassessed now.							

APPEN
Totals of the Circle

Name of pargana.	Names of pattis occurring in the circle.	Name of circle.	Assessable area.			Revenue at the accepted revenue rates for the circle.	Incidence of column 7 on cultivated area.
			Present cultivated area.	Present area of new fallow.	Total of columns 4 and 5.		
1	2	3	4	5	6	7	8
Ganga Salán,	Ajmír, Langúr, Udepur Bichla, Udepur Malla, Udepur Talla.	I.—Forest and southern circle, 5 as. per <i>bisi</i> .	6,900.9	1,294.0	8,194.9	2,483	0 5 9
Ditto ...	Ajmír, Dhángu Malla, Karaundu Palla, Karaundu Walla, Langúr.	II.—Dabrársyún circle, 7 as. per <i>bisi</i> .	8,016.4	1,063.4	9,079.8	4,357	0 8 9
Ditto ...	Ajmír	III.—Ajmír Southern circle, 7 as. per <i>bisi</i> .	601.3	194.4	795.7	401	0 10 8
Ditto ...	Udepur Bichla, Ajmír	IV.—Kashyáli circle, 9 as. per <i>bisi</i> .	1,240.2	52.5	1,292.7	912	0 11 9
Ditto ...	Udepur Bichla, Udepur Talla	V.—South Udepur circle, 7 as. per <i>bisi</i> .	9,139.6	701.5	9,841.1	4,821	0 8 5
Ditto ...	Dhángu Malla, Dhángu Talla, Karaundu Palla, Udepur Bichla, Udepur Malla.	VI.—North Udepur and Chaurgaddi circle, 6 as. per <i>bisi</i> .	7,185.4	1,294.4	8,479.8	3,073	0 6 10
Ditto ...	Udepur Bichla, Udepur Malla	VII.—Central Udepur circle, 5 as. per <i>bisi</i> .	1,072.0	111.3	1,183.3	365	0 5 5
Ditto ...	Udepur Malla	VIII.—Hyúnl valley circle, 8 as. per <i>bisi</i> .	685.9	85.3	771.2	424	0 9 11
Ditto ...	Dhángu Malla, Dhángu Talla, Karaundu Walla, Langúr.	IX.—Ganges and Langúr-garhi circle, 5 as. per <i>bisi</i> .	8,128.9	1,751.2	9,880.1	2,693	0 5 4
Ditto ...	Dhángu Malla, Dhángu Talla	X.—Dhángu circle, 7 as. per <i>bisi</i> .	2,267.8	291.3	2,559.1	1,055	0 7 5
Ditto ...	Dhángu Talla, Karaundu Walla, Langúr.	XI.—Nayár circle, 8 as. per <i>bisi</i> .	1,516.3	278.8	1,795.1	1,012	0 10 8
Ditto ...	Karaundu Walla, Langúr	XII.—Dádámandi circle, 10 as. per <i>bisi</i> .	588.2	17.4	605.6	484	0 13 2
Total of the pargana ...			47,342.9	7,135.5	54,478.4	22,080	0 7 6
Malla Salán ...	Sábli	I.—13 as. per <i>bisi</i>	40.4	1	40.5	48	1 3 0
Ditto ...	Khátli, Sábli	II.—12 annas per <i>bisi</i>	297.6	4.5	302.1	298	1 0 0
Ditto ...	Bangársyún, Dhaundyálsyún, Khatli, Sábli.	III.—11 as. per <i>bisi</i>	548.3	11.4	559.7	508	0 14 10
Ditto ...	Iriyákot, Kolágád, Bangársyún, Sábli, Dhaundyálsyún, Saindhár, Gujru, Talain, Khátli.	IV.—Circle, 10 as. per <i>bisi</i> .	3,043.5	87.1	3,130.6	2,605	0 14 0
Ditto ...	Bangársyún, Dhaundyálsyún, Gujru, Khátli, Sábli.	V.—9 as. per <i>bisi</i>	1,731.1	52.7	1,783.8	1,372	0 12 8
Ditto ...	Bangársyún, Gujru, Iriyákot, Khátli, Kolágád, Sábli, Talain, Dhaundyálsyún.	VI.—8 as. per <i>bisi</i>	13,163.2	855.6	14,018.8	8,845	0 10 9
Ditto ...	Bangársyún, Dhaundyálsyún, Gujru, Khatli, Meldhár, Sábli, Saindhár.	VII.—7 as. per <i>bisi</i>	4,976.0	283.1	5,259.1	2,914	0 9 6
Ditto ...	Bangársyún, Dhaundyálsyún, Gujru, Iriyákot, Khatli, Meldhár, Sábli, Saindhár, Talain.	VIII.—6 as. per <i>bisi</i>	3,235.5	401.9	3,637.4	1,625	0 8 0
Ditto ...	Bangársyún, Dhaundyálsyún, Gujru, Khatli, Meldhár, Saindhár.	IX.—5 as. per <i>bisi</i>	455.9	30.4	486.3	188	0 6 8
Ditto ...	Gujru, Saindhár	X.—4 as. per <i>bisi</i>	15.2	7	15.9	4	0 4 3
Total of the pargana ...			27,506.7	1,727.5	29,234.2	18,497	0 10 9
Nágpur ...	Nágpur Bichla, Nágpur Talla	I.—Akánanda circle, 10 as. per <i>bisi</i> .	1,011.4	78.8	1,090.2	1,213	1 3 2
Ditto ...	Ditto ditto	II.—Nágpur circle, 8 as. per <i>bisi</i> .	10,482.2	326.8	10,809.0	7,104	0 10 10
Total of the pargana ...			11,493.6	405.6	11,899.2	8,317	0 11 7
Talla Salán ...	Bijlot Walla, Bijlot Palla	I.—Bijlot Walla north-east circle, 6 as. per <i>bisi</i> .	391.2	33.9	425.1	186	0 7 7
Ditto ...	Bijlot Walla	II.—Bijlot Walla south-west circle, 8 as. per <i>bisi</i> .	1,827.7	65.0	1,892.7	1,173	0 10 3
Ditto ...	Ditto	III.—Bijlot Walla east circle, 10 as. per <i>bisi</i> .	247.2	2.6	249.8	197	0 12 9

DIX VII.
Assessment Registers—(continued).

Incidence of column 7 on assessable area (column 6).	Value of gross produce at the estimated produce values of the circle.	Former revenue (current demand).	Incidence of former revenue on cultivation at last settlement.	Proposed revenue.	Incidence of proposed revenue on present cultivated area.	Incidence of proposed revenue on assessable area. (column 6).	Percentage of proposed revenue on estimated value of gross produce (column 10).	Percentage of increase or decrease on the revenue demand.	Percentage of proposed revenue to revenue at accepted revenue rates (column 7).	Remarks.
9	10	11	12	13	14	15	16	17	18	19
Rs. a. p.	Rs.	Rs. a. p.	Bs. a. p.	Rs.	Rs. a. p.	Rs. a. p.				
0 4 10	72,144	1,426 0 0	0 12 0	2,470	0 5 9	0 4 10	3.42	73.21	99.48	
0 7 8	1,13,119	2,951 0 0	0 12 8	4,329	0 8 8	0 7 8	3.83	46.70	99.36	
0 8 1	11,384	295 0 0	1 1 10	393	0 10 5	0 7 11	3.45	33.22	98.00	
0 11 3	22,772	729 0 0	0 15 11	912	0 11 9	0 11 3	4.01	25.10	100.00	
0 7 10	1,26,940	3,160 8 0	0 12 7	4,713	0 8 3	0 7 8	3.71	49.12	97.76	
0 5 10	80,003	1,786 8 0	0 12 6	2,979	0 6 8	0 5 7	3.72	166.74	96.94	
0 4 11	10,071	190 0 0	0 12 4	353	0 5 3	0 4 9	3.51	85.79	96.71	
0 8 10	11,096	312 8 0	0 12 4	411	0 9 7	0 8 6	3.70	31.41	96.93	
0 4 4	74,503	1,603 0 0	0 12 4	2,650	0 5 3	0 4 3	3.61	65.32	98.40	
0 6 7	28,360	656 0 0	0 15 11	1,035	0 7 4	0 6 6	3.65	57.77	98.10	
0 9 0	27,397	618 0 0	0 14 11	984	0 10 5	0 8 9	3.59	59.22	97.23	
0 12 9	11,420	345 0 0	0 15 3	466	0 12 7	0 12 4	4.24	35.07	96.26	
0 6 8	5,89,209	14,072 8 0	0 13 0	21,695	0 7 4	0 6 4	3.68	54.12	98.26	
1 3 0	1,032	60 0 0	1 9 4	48	1 3 0	1 3 0	4.65	...	100	
0 15 9	6,810	298 0 0	1 5 6	307	1 0 6	1 0 3	4.51	6.60	103.02	
0 14 6	11,835	502 0 0	1 0 7	504	0 14 9	0 14 5	4.26	4.0	99.21	
0 13 7	63,328	1,776 0 0	1 1 6	2,681	0 14 1	0 13 8	4.23	51.01	100.06	
0 12 4	34,381	920 0 0	1 0 1	1,337	0 12 4	0 12 0	3.80	45.33	97.45	
0 10 1	2,31,520	5,659 8 1	1 0 1	8,774	0 10 9	0 10 0	3.79	85.03	99.20	
0 8 11	77,299	1,767 14 11	0 13 6	2,891	0 9 4	0 8 9	3.74	63.52	98.20	
0 7 1	42,602	850 0 0	0 13 1	1,619	0 8 0	0 7 1	3.80	90.59	99.69	
0 6 2	5,222	101 0 0	0 12 2	187	0 6 7	0 6 2	3.58	85.15	99.47	
0 4 0	121	...	...	4	0 4 3	0 4 0	3.31	...	100	
0 10 1	4,74,150	11,924 7 0	0 15 1	18,352	0 10 8	0 10 1	3.03	53.90	99.14	
		Add 8 0	Revenue of a Nayábad village not surveyed and assessed at present settlement							
		11,924 15 0								
1 1 10	29,845	812 4 0	1 3 7	1,198	1 2 11	1 1 6	4.00	147.40	98.76	
0 10 6	1,87,464	4,787 8 0	0 15 3	7,107	0 10 10	0 10 6	3.79	48.44	100.04	
0 11 3	2,17,309	5,599 12 0	0 15 9	8,305	0 11 7	0 11 2	3.82	48.21	99.86	
0 7 0	4,903	132 3 3	0 12 10	190	0 7 9	0 7 2	3.88	43.79	102.15	
0 9 11	30,533	871 0 0	0 14 6	1,161	0 10 2	0 9 10	3.80	33.29	98.98	
0 12 7	4,669	160 0 0	1 15 0	195	0 12 7	0 12 6	4.18	21.88	98.98	

Totals of the Circle

Name of paraganas.	Names of pattis occurring in the circle.	Name of circle.	Assesable area.			Revenue at the accepted revenue rates for the circle.	Incidence of column 7 on cultivated area.
			Present cultivated area.	Present area of new fallow.	Total of columns 4 and 5.		
1	2	3	4	5	6	7	8
			Acres.	Acres.	Acres.	Rs.	Rs. a. p.
Talla Salán ...	Bijlot Palla, Búngi ...	IV.—Bijlot Palla and Búngi General circle, 7 as. per <i>bisi</i> .	5,348.9	347.4	5,696.3	3,245	0 9 8
Ditto ...	Ditto ...	V.—Bijlot Palla and Búngi Eastern circle, 5 as. per <i>bisi</i> .	386.9	26.0	412.9	164	0 6 9
Ditto ...	Bijlot Palla, Badalpur Talla, Búngi, Painon, Sila Malla, Sila Talla.	VI.—Forest circle, 5 as. per <i>bisi</i> .	4,255.9	394.5	4,650.4	1,992	0 7 6
Ditto ...	Búngi ...	VII.—Búngi Central circle, 10 as. per <i>bisi</i> .	202.1	8.0	210.1	179	0 14 3
Ditto ...	Badalpur Malla, Painon ...	VIII.—Badalpur Malla and Painon Central circle, 7 as. per <i>bisi</i> .	8,483.3	973.4	9,456.7	5,019	0 9 7
Ditto ...	Painon ...	IX.—Painon North-Eastern circle, 5 as. per <i>bisi</i> .	306.4	34.2	340.6	124	0 6 6
Ditto ...	Badalpur Talla, Kauriya Palla, Sila Malla, Sila Talla.	X.—Badalpur Talla and Sila General circle, 7 as. per <i>bisi</i> .	5,781.6	563.9	6,345.5	3,438	0 9 6
Ditto ...	Sila Malla, Kauriya Walla, Badalpur Talla, Badalpur Malla.	XI.—Utain circle, 5 as. per <i>bisi</i> .	1,259.2	232.0	1,491.2	460	0 6 10
Ditto ...	Badalpur Talla ...	XII.—Talla Badalpur Central circle, 10. as per <i>bisi</i> .	103.1	19.4	122.5	81	0 12 7
Ditto ...	Badalpur Malla ...	XIII.—Nayár circle, 5 as. per <i>bisi</i> .	67.5	34.0	101.5	29	0 6 11
Ditto ...	Ditto ...	XIV.—Malla Badalpur Northern circle, 10 as. per <i>bisi</i> .	525.5	62.3	587.8	435	0 13 2
Ditto ...	Kauriya Walla ...	XV.—Kauriya Walla General circle, 6 as. per <i>bisi</i> .	1,725.0	221.5	1,946.5	738	0 6 10
Ditto ...	Ditto ...	XVI.—Kauriya Walla Central circle, 8 as. per <i>bisi</i> .	452.5	43.8	496.3	279	0 9 10
Ditto ...	Sila Malla ...	XVII.—Sila North-East circle, 10 as. per <i>bisi</i> .	464.1	15.2	479.3	363	0 12 6
Ditto ...	Kauriya Palla, Sila Malla ...	XVIII.—Káladánda circle 5 as. per <i>bisi</i> .	992.0	89.9	1,081.9	421	0 6 9
Ditto ...	Sila Malla, Sila Talla ...	XIX.—Charekh circle 5 as. per <i>bisi</i> .	319.2	42.2	361.4	127	0 6 4
Ditto ...	Bhátar ...	I.—Jhirna circle ...	137.0	18.2	155.2	118	0 13 9
Ditto ...	Ditto ...	II.—Mawákot circle ...	102.0	14.8	116.8	120	1 2 10
Ditto ...	Ditto ...	III.—Balbhadrapur circle	231.8	8.8	240.6	362	1 9 0
Total of paraganas Talla Salán.			33,610.1	3,251.0	36,861.1	19,250	0 9 2
GRAND TOTAL OF THE DISTRICT.			2,35,566.1	24,137.1	2,59,703.2	1,44,765	0 9 10

NOTE.—For difference between the figure in column 7 (grand total) of this appendix and column 23 (total) of Appendix VI and also

Assessment Registers.—(concluded).

Incidence of column 7 on assessable area (column 6).	Value of gross produce at the estimated produce values of the circle.	Former revenue (current demand).	Incidence of former revenue on cultivation at last settlement.	Proposed revenue.	Incidence of proposed revenue on present cultivated area.	Incidence of proposed revenue on assessable area (column 6).	Percentage of proposed revenue on estimated value of gross produce (column 10).	Percentage of increase or decrease on the revenue demand.	Percentage of proposed revenue to revenue at accepted revenue rates (column 7).	Remarks.
9	10	11	12	13	14	15	16	17	18	19
Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs. a. p.					
0 9 1	86,343	2,165 0 0	0 15 0	3,171	0 9 6	0 8 11	3.67	46.47	97.72	
0 6 4	4,412	143 0 0	0 15. 2	166	0 6 10	0 6 5	3.76	16.08	101.22	
0 6 10	64,931	1,231 4 0	0 14 7	1,986	0 7 5	0 6 10	3.06	61.33	99.70	
0 13 8	4,206	142 0 0	1 1 8	167	0 13 3	0 12 9	3.38	17.61	93.30	
0 8 6	1,38,429	2,779 12 0	0 14 1	4,915	0 9 3	0 8 4	3.55	76.79	97.93	
0 5 10	3,735	48 8 0	0 11 8	123	0 6 5	0 5 9	3.29	154.17	99.19	
0 8 8	94,958	1,984 4 0	0 14 4	3,371	0 9 4	0 8 6	3.55	69.91	98.05	
0 4 11	12,387	232 0 0	0 11 1	459	0 5 10	0 4 11	3.70	97.84	99.78	
0 10 7	1,892	61 8 0	1 0 2	75	0 11 8	0 9 10	3.96	21.31	92.59	
0 4 7	776	10 0 0	0 9 2	29	0 6 11	0 4 7	3.74	57.89	100.00	
0 12 1	9,652	309 0 0	0 14 7	431	0 13 1	0 11 9	4.46	8.02	99.08	
0 6 1	19,702	348 8 0	0 13 2	715	0 6 7	0 5 11	3.63	105.17	96.89	
0 9 0	7,980	162 0 0	0 15 1	273	0 9 8	0 8 10	3.70	68.52	97.85	
0 12 1	8,646	262 0 0	0 15 3	358	0 12 4	0 11 11	4.14	36.64	98.62	
0 8 1	13,003	214 0 0	0 9 0	419	0 6 9	0 6 2	3.22	95.77	99.52	
0 2 2	2,449	109 0 0	1 4 2	160	1 2 8	1 0 6	6.53	46.79	135.59	
0 6 5	2,605	70 0 0	0 13 0	120	1 2 10	1 0 5	4.61	71.43	100	
1 8 1	7,220	...	...	362	1 9 0	1 8 1	5.01	...	100	
0 8 4	5,26,594	11,581 15 3	0 14 3	18,973	0 9 0	0 8 3	3.60	63.81	98.56	
0 8 11	37,49,530	91,568 14 7	0 14 0	1,42,707	0 9 8	0 8 9	3.81	55.85	98.57	

between those in column 10 (grand total) of the Appendix and column 24 (total) of Appendix VI, vide foot note to Appendix VI.
E. K. PAUW, C.S.,
In charge of the Settlement.

APPENDIX VIII.

Statement showing villages in which progressive assessments were proposed and sanctioned in the District of Garhwal.

Number.	Name of Pargana.	Name of Patti.	Name of village.	Last Settlement revenue.	Progressive assessments.			Remarks.
					First three years.	Second three years.	Final.	
1	2	3	4	5	6	7	8	9
1	Badhan.	Kapiri ...	Gain Saján Kutáh ...	3	15	24	30	
2			Ko a Dungi Gunth ...	16	32	41	41	
			Total ...	19	47	65	71	
3		Kbansar ...	Deopuri ...	2	20	36	46	
4			Lakhau	5	10	15	
			Total ...	2	25	46	61	
5		Pindarwár,	Dyusári ...	12	30	41	49	
			Total ...	12	30	41	49	
			Total of the pargana ...	33	102	152	181	
6		Aswálsyún,	Siron ...	37	74	87	87	
			Total ...	37	74	87	87	
7			Banelsyún,	Badur ...	18	36	45	51
8		Bayera ...		17	34	43	47	
9	Malogi Lagga of Dadogi ...	15		30	37	48		
10	Naugaon ...	43		86	87	87		
11	Nawári ...	27		54	63	68		
12	Rengúr ...	21		42	47	47		
13	Birsani Gunth ...	39		78	97	97		
	Total ...	180	360	419	440			
14	Bangarhsyún.	Dhungi ...	20	40	47	47		
15		Kharet Talla ...	21	42	48	48		
16		Panchur ...	24	48	50	50		
	Total ...	65	130	145	145			
17	Gagwársyún,	Lwáli Lagga of Garh ...	17	34	42	57		
18		Tamlag ...	100	200	203	203		
		Total ...	117	234	245	260		
19	Idwálsyún,	Bám ...	36	72	90	90		
20		Thaula Lagga of Bára ...	24	48	53	53		
21		Jakher ...	31	62	77	84		
22		Jaskot ...	43	86	107	107		
23		Kesundra ...	29	58	72	86		
	Total ...	163	326	399	420			
24	Kandwálsyún.	Pabau Lagga of Sirála ...	24	48	51	51		
25		Dhári Gunth ...	15	30	37	44		
		Total ...	39	78	88	95		
26	Kapholsyún	Agrora Lagga of Dáng ...	22	44	53	53		
27		Nauli ...	25	50	63	63		
28		Silet ...	47	94	111	111		
	Total ...	94	188	227	227			
29	Khátsyún,	Kalún ...	36	72	82	82		
		Total ...	36	72	82	82		
30		Manyársyún,	Asgarh ...	26	52	65	82	
31	Bhatkotí ...		22	44	48	48		
32	Kund ...		56	112	119	119		
33	Pinapini Lagga of Kathur ...		24	5	6	37		
34	Kaunteln ...		25	50	60	60		
35	Panchali ...		29	56	61	61		
36	Dyúsi Gunth ...		35	70	72	72		
	Total ...	194½	389	431	479			
37	Paidúlsyún,	Paidúl ...	58	116	146	146		
		Total ...	58	116	146	146		
38	Patwálsyún,	Gidrásu ...	37	74	91	91		
		Total ...	37	74	91	91		
39	Ráwateyún,	Del ...	25	50	63	63		
		Total ...	25	50	63	63		
40	Sitonsyún,	Aerari ...	10	20	25	37		
41		Rakhún ...	38	76	91	91		
		Total ...	48	96	116	128		
	Total of the pargana ...			1,093½	2,187	2,539	2,663	
42	Chauthén ...	Maikholi Lagga of Mason ...	18	36	45	55		
		Total ...	18	36	45	55		
43	Choprákot...	Dhumka ...	23	46	51	51		
44		Ira ...	23	46	56	56		
45		Gwári ...	13	26	35	44		
46		Saunti ...	22	44	55	55		
	Total ...	81	162	197	206			

APPENDIX VIII.

Statement showing villages in which progressive assessments were proposed and sanctioned in the District of Garhwál—(continued).

Number.	Name of Pargana.	Name of Patti.	Name of village.	Last settlement revenue.	Progressive assessments.			Remarks.
					First three years.	Second three years.	Final.	
1	2	3	4	5	6	7	8	9
47	Chāndpur.	Dhājyūli ...	Bageli ...	19	38	46	46	
48			Dungri Talli ...	28	56	60	60	
49			Ghulek ...	18	36	44	44	
50			Salauj Gunth ...	20	40	50	57	
			Total ...	85	170	200	207	
51		Loliba ...	Gaul ...	15	30	40	48	
52			Andarpa Lagga of Kotlār ...	10	25	36	36	
53			Mahargau ...	17	34	43	43	
54			Rohira ...	25	75	120	163	
55			Bajyani Lamidhar ...	10	25	35	42	
56	Bina Gunth ...	35	70	79	79			
	Total ...	112	259	353	411			
57	Sili ...	Ratura ...	38	76	93	93		
	Total ...	38	76	93	93			
58	Sirgur ...	Mauna ...	13	26	37	37		
	Total ...	13	26	37	37			
59	Taili ...	Chaundli ...	32	64	74	74		
60		Ghārtoli Lagga of Kaphlori ...	8	25	35	42		
		Total ...	40	89	109	116		
	Total of the pargana ...			387	818	1,034	1,125	
61	Chāndkot.	Gurārayūn, {	Kandai ...	55	110	116	116	
62			Kurikhāl ...	29	56	64	64	
63			Sanglakoti ...	42	84	95	95	
	Total ...	125	250	275	275			
64	Mawālyūn,	Dundrakoti Lagga of Rauswa,	18	36	40	40		
	Total ...	18	36	40	40			
	Total of the pargana ...			143	286	315	315	
65	Dasauli.	Dasauli Malli,	Jakhui ...	25	50	60	60	
			Total ...	25	50	60	60	
66			Dasauli Talli,	Maikhura Malla and Talha ...	19	40	50	50
	Total ...	19		40	50	50		
	Total of the pargana ...			44	90	110	110	
67	Bachhansyūn.	{	Bamsu ...	19	38	47	52	
68			Fatehpur ...	16	32	42	52	
69			Maharaberi ...	13	30	40	40	
70			Nawasu ...	58	116	130	130	
	Total ...	106	216	259	274			
71	Chalansyūn,	{	Dhainskot ...	26	52	62	62	
72			Garh Lagga of Gawana ...	14	30	40	45	
73			Sarana ...	22	44	48	48	
	Total ...	62	126	150	155			
74	Dewalgarb.	{	Gophr ...	14	30	39	39	
75			Gadora ...	17	34	42	42	
76			Kodina ...	15	30	42	42	
77			Kalna ...	23	46	57	62	
78			Pundar ...	47	94	112	112	
79			Tuna ...	46	92	100	100	
	Total ...	162	326	392	397			
80	Ghurdotsyūn.	{	Pokhrigau Lagga of Bisald ...	22	44	49	49	
81			Dharkot ...	18	36	43	43	
82			Kota ...	26	52	56	56	
	Total ...	66	132	148	148			
83	Kathūlyūn,	{	Nakot Lagga of Khālu ...	42	84	96	96	
84			Kathār ...	26	52	64	64	
			Total ...	68	136	160	160	
	Total of the pargana ...			464	936	1,109	1,134	
85	Ajmir ...	{	Bindalgau ...	12	30	41	41	
86			Chuna Mahera alias Bharpur,	17	35	45	45	
87			Patoti Rauliyūl Lagga of Dyāla,	22	44	49	49	
	Total ...	51	109	135	135			
88	Dhāngu Malla,	{	Khera ...	33	65	80	80	
			Total ...	33	65	80	80	
89	Dhāngu Talla,	{	Gum ...	22	43	48	48	
90			Pokhta Lagga of Hatnur ...	43	86	107	110	
91			Kāndi ...	32	63	68	68	
	Total ...	97	192	223	223			

APPENDIX VIII.

Statement showing villages in which progressive assessments were proposed and sanctioned in the district of Garhwál—(continued).

Number.	Name of Pargana.	Name of Patti.	Name of village.	Last settlement revenue.	Progressive assessments.			Remarks.	
					First three years.	Second three years.	Final.		
1	2	3	4	5	6	7	8	9	
92	Ganga Salán.	Karaundu Palla.	Dudpura ...	25	50	60	60		
93			Surari ...	40	80	95	95		
			Total ...	65	130	155	155		
94		Karaundu Walla.	Bhalgaon Chhota ...	26	52	54	54		
			Total ...	26	52	54	54		
95		Langúr ...	Bhelda.Lagga of Dhári.	16	35	46	46	
96				Kular ...	39	76	95	111	
97				Mathgáon ...	21	42	53	53	
98				Sainj Malla ...	20	40	48	48	
99				Semlya ...	15	30	37	48	
100	Satpuli ...			19	38	45	45		
101	Wadyari ...			23	46	54	54		
		Total ...	152	307	378	405			
102	Udepur Bichla.	Awai ...	... ..	63	126	159	159	
103			Debrana ...	67	134	135	135		
104			Silarikatal Lagga of Jiyar Katal. ...	12	30	40	54		
105			Jaurasi Talli ...	18	36	45	54		
		Total ...	160	326	379	402			
106	Udepur Malla.	Mágtá ...	... ..	27	54	67	67	
			Total ...	27	54	67	67		
107	Udepur Talla.	Binak Malla ...	... ..	11	30	46	40	
108			Ramjani Rankar ...	24	48	54	54		
109			Timli Akara ...	26	52	56	56		
110			Naugaon Malla Gunth ...	26	52	65	65		
			Total ...	87	182	215	215		
		Total of the pargana ...	698	1,417	1,686	1,730			
111	Dhaundyál-syán.	Kamliya Walla ...	... ..	28	56	67	67	
			Total ...	28	56	67	67		
112	Iriyákot ...	Byála ...	... ..	27	54	68	68	
113			Churáni ...	52	104	110	110		
114			Dalmota Malla and Talla ...	32	63	73	73		
115			Kimgaon ...	32	63	68	68		
116			Riwa ...	22	44	54	54		
117			Sundroli ...	38	76	95	100		
118			Walsa Malla ...	50	100	110	110		
119			Walsa Talla ...	32	64	66	66		
		Total ...	285	568	644	640			
120	Khátli ...	Khitotiya ...	... ..	36	72	75	75	
121			Mangron ...	18	36	41	41		
122			Pali ...	30	60	67	67		
123			Sili Malla ...	46	92	115	119		
124			Sili Talli ...	37	74	90	90		
125			Sungriya ...	26	52	59	59		
126			Thakulsari Chhota Lagga of Thakulsari Bara. ...	11	22	27	30		
		Total ...	204	408	474	481			
127	Kolagád ...	Kola ...	... ..	42	84	104	104	
128			Mahargaon Talla ...	19	20	29	42		
129			Sald ...	25	50	54	54		
		Total ...	77	154	183	200			
130	Sábli ...	Bharpur Bara ...	... ..	55	110	116	116	
131			Garhkot ...	10	20	25	46		
132			Kasani ...	50	100	105	105		
133			Mási ...	20	40	48	48		
134			Panchsar ...	36	72	88	88		
		Total ...	171	342	382	403			
135	Talaín ...	Bansai ...	... ..	12	24	30	41	
136			Bina Palli Gad ...	18	36	45	47		
137			Dyúrari Talla ...	19	38	47	47		
138			Harkot Talla ...	32	64	68	68		
139			Mayalgaon Malle Lagga of Harkot. ...	14	28	35	44		
140			Aslot Talla ...	13	26	32	50		
		Total ...	108	216	257	297			
		Total of the pargana ...	873	1,744	2,007	2,097			

APPENDIX VIII.

Statement showing villages in which Progressive assessments were proposed and sanctioned in the district of Garhwal.—(concluded).

Number.	Name of pargana.	Name of patti.	Name of village.	Last settlement revenue.	Progressive assessments.			Remarks.			
					First three years.	Second three years.	Final.				
1	2	3	4	5	6	7	8	9			
141	Nágpur.	Nágpur	Girsa	54	108	117	117				
142			Kunjasu	21	42	46	46				
143			Bichla. {	Lodia Sewai	52	104	115	115			
				Total	127	254	278	278			
144		Nágpur Talla	{	Chanswára	19	38	45	45			
145				Ghandhari Hapuwa	34	68	75	75			
146				Goran Gunth	15	30	45	45			
				Total	68	136	165	165			
			Total of the pargana ...	195	390	443	443				
		Painkhande.	Painkhande Talla and Malla.	Nil.							
147											
148	Badalpur		{	Angni	36	72	78	78			
149				Bhaysu	19	38	46	46			
150				Malla. {	Lawara Walla	16	32	40	50		
151					Maletli Malli	20	40	50	54		
				Sinálá	36	72	74	74			
			Total	127	254	288	302				
152	Badalpur		{	Gbangli	37	73	78	78			
153				Talla. {	Majola	19	38	47	50		
154				Paiuwalgaon	7½	25	34	34			
		Total	63½	136	159	162					
155	Bijlot Palla.	{	Chilon Palla	20	39	46	46				
156				Kinat	17	32	42	42			
				Total	37	71	88	88			
157	Kauriyá Palla.	{	Audla	12	30	39	39				
		Total	12	30	39	39					
158	Kauriyá	{	Kimar	30	60	61	61				
159			Walla. {	Kaphaldi Dhúrá... ..	33	66	79	79			
160				Majkot	24	48	51	51			
				Total	87	174	191	191			
161	Talla Silan.	{	Badayargaon Talla Lagga of Badiyargaon Malla.	8	24	34	43				
162				Kemusera Lagga of Baman gaon.	5	20	30	30			
163				Bayala	18	36	45	45			
164				Dhikoliya Lagga of Dhamdhar,	5	25	35	43			
165				Gotyart	34	68	74	74			
166				Jhart	47	94	98	98			
167			Painon	{	Kimar	12	30	40	40		
168						Kartya	43	86	101	101	
169						Papri	22	44	48	48	
170						Umeduki Bakhal Lagga of Tolyun.	11	25	38	38	
171						Garhkot Lagga of Anet ...	18	36	46	46	
172						Jaskot Lagga of Andargaon,	15	30	40	40	
173						Bhandarsera Lagga do ...	36	72	77	77	
174				Masmoli	13	30	41	41			
				Total	287	620	747	764			
175			Sila Malla...	{	Bádkot	24	48	51	51		
176						Kota... ..	22	44	47	47	
177		Dangwalgaon Lagga of Sila malla.			32	64	75	75			
		Total	78	156	173	173					
178	Sila Talla ...	{	Juá	27	54	67	73				
179				Purankot	20	40	51	51			
				Total	47	94	118	124			
		Total of the pargana ...	738½	1,535	1,803	1,849					
		GRAND TOTAL OF DISTRICT	4,669	9,505	11,198	11,650					

B. K. PAUW, C.S.,

In charge of the Settlement.

APPENDIX IX.

Statement showing villages in the Garhwál district in which the proposed assessments exceed or fall below the revenue calculated at the accepted revenue rates by more than 10 per cent.

Number.	Pargana.	Patni.	Village.	Revenue at the accepted revenue rates.	Proposed assessment.	Percentage of increase or decrease of the proposed assessment on the revenue at the accepted revenue rates.	Remarks.
1	2	3	4	5	6	7	8
1	Badhán,	Karúkot ...	Kaphártir ...	17	21	+23.53	
2		Khansar ...	Lakhan ...	2	15	+650.00	
3		Pindarwár ...	Rai ...	49	44	-10.20	
4	Bárah-syún.	Idwálsyún ...	Chumserá Laggá of Girgaon ...	29	38	+31.03	
5			Srisot Laggá of Guleth ...	17	23	+35.29	
6			Baidgaon (gunth) ...	16	22	+37.50	
7			Bánjoti ...	6	7	+16.67	
8	Chándpur.	Chauthún ...	Bhainawára Laggá of Bharnaun	5	4	-20.00	
9			Kusráni Laggá of Bagdyálgaon	7	6	-14.28	
10			Ghimdya Laggá of Dadoli Malli	12	10	-16.6	
11			Jainti chak No. 1, Laggá of Jainti	16	14	-12.50	
12			Dankandai Laggá of Kandai...	9	8	-11.1	
13			Kimwári ...	48	55	+14.58	
14			Ainthe ...	90	68	-24.4	
15			Choprákot ...	51	59	+15.69	
16			Lohbá ...	4	9	+125.00	
17			Singur ...	3	5	+66.6	
18	Taili ...	9	7	-22.2			
19	Chaundkot.	Gurársyún ...	Kansár <i>alias</i> Kándásúr Laggá of Chaidhár Mallá.	6	7	+16.67	
20			Maundársyún ...	Kholyún ...	42	50	+19.05
21	Dasauli	<i>Nil.</i>	Kumrári ...	43	48	+11.12	
22	Dewalgarh.	Bachhansyún ...	Bangaon Mallá ...	17	15	-11.76	
23			Kuleth ...	17	15	-11.76	
24			Moltá Laggá of Nawásu ...	9	8	-11.1	
25			Búdni Laggá of Nisni ...	25	22	-12.0	
26			Kimdáng ...	27	24	-11.1	
27			Chaukhal Laggá of Gosyal ...	14	12	-14.28	
28			Odlá ...	2	4	+100	
29			Khairi ...	6	5	-16.6	
30			Naugad ...	7	6	-14.28	
31			Bharik ...	12	10	-16.66	
32	Kandársyún ...	1	2	+100.0			
33	Kathálsyún ...	29	26	-10.34			
34	Ajmr ...	44	60	+36.36			
35	Gangá Salán.	Dhángú Mallá ...	Halduá Laggá of Dábar ...	17	20	+17.65	
36			Deobári ...	7	8	+14.29	
37			Gul ...	39	43	+10.26	
38			Godra ...	8	10	+25.00	
39			Papri Laggá of Dhánsi ...	22	14	-36.36	
40			Majphá Laggá of Kaindul Tallá	16	14	-12.50	
41			Methá ...	30	18	-40.00	
42			Srikot <i>alias</i> Amsain ...	28	23	-17.86	
43			Tatri ...	35	29	-17.14	
44			Asnet ...	30	26	-13.33	
45	Mollá Salán.	Karaundú Wallá ...	Bhalgaon chhotá ...	69	54	-21.74	
46			Bhatikhora Laggá of Gwalgáon	15	12	-20.00	
47			Hitka-kandla Laggá of Gwalgáon	7	5	-28.57	
48			Kotli ...	27	31	+14.82	
49			Naini ...	29	32	+10.34	
50			Kesht ...	66	81	+22.72	
51			Bhukandi ...	87	75	-13.79	
52			Bisdándá Laggá of Timli Palli	27	23	-14.81	
53			Rinak Malla ...	45	40	-11.11	
54			Manghagaon ...	43	36	-16.28	
55	Sileari (Gunth) ...	48	40	-16.66			
56	Gujrú ...	Talnín ...	Burát Tallá Laggá of Parsoli Walli	25	28	+12.0	
57			Saindhari zamin Laggá of ditto	9	8	-11.11	
58			Godiya Laggá of Kanda Malla	8	7	-12.5	
59			Maharkholá Laggá of ditto	17	15	-11.77	
60	Nágpur	Bichla Nágpur ...	Panás Malla ...	32	40	+25.00	
61			Silet Laggá of Matgal ...	9	8	-11.11	
62			Nangaon Laggá of Saknoli ...	18	20	+11.11	
63			Taroti Bairasu Laggá of Gugli ...	10	8	-20.0	
64	Painkhanda	Badalpur Mallá ...	<i>Nil.</i>				
65			Gawóná Pallá Laggá of Gawóná Walla ...	29	26	-10.34	
66			Patgaon Tallá ...	18	20	+11.11	
67			Fatchpur Malla Laggá of Bindali Malla ...	7	6	-14.29	
68	Tallá Salán	Silá Mallá ...	Nakuwaki khol ...	6	5	-16.6	
69			Báungi ...	Basani	7	+0.0

APPENDIX X.
List of existing Fee Simple estates in the district of Garhwál.

Pargana.	Patti.	Serial number.	Fee simple estate.	Area by grant.	Area at present survey.	Former nominal jama for cesses.		Nominal jama now assessed.	Cesses, calculated on the amount now assessed.		Area under tea in the year—				Remarks.
						Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	1892.	1893.	1894.	1895.	
				Acres r. p.	Acres r. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	1% cesses.	% patwari rate.	Acres.	Acres.	Acres.	Acres.	
Badbān ...	Findarwār, ...	1	Gwáldam ...	594 0 26	Not surveyed.	61 0 0	80 0 0	9 9 7	3 3 0	10	150	150	150	15	
				290 1 20	Do.	29 0 0	40 0 0	4 12 10	1 9 0	1894.	150	150	150		
				720 3 24	Do.	72 0 0	72 0 0	8 10 3	2 14 0	1893.	100	65	65		
				1,288 0 20	Do.	128 0 0	128 0 0	15 5 9	5 2 0	Waste.					
				577 3 0	Do.	51 0 0	51 0 0	6 1 11	2 0 0						
				929 3 18	Do.	100 0 0	100 0 0	12 0 0	4 0 0	80	75	5	5		
Bérabáyún,	Nándaláyún,	6	Gadoli with Marwara, Pokbri and Chalungau.	14 3 27	12 2 7	115 0 0	2 0 0	0 3 10	Nil.		No tea is grown.				
				57 0 21	Not surveyed.	50 0 0	50 0 0	1 9 0	0 8 0						
				504 2 32	Do.	50 0 0	50 0 0	6 0 0	2 0 0						
Chándpur,	Choprakot, ...	10	Chinkulári (lagaan of Chhapáli ...)	265 0 3	{ 31 1 2	37 0 0	9 0 0	1 1 3	Nil.		These villages together with Silkot, Chhapali and Mahargaon, were recorded at survey as growing tea on about 78·2 acres of area; grain is grown in addition to tea in these villages.				
					{ 164 1 29		46 0 0	5 8 4	1 13 0						
					{ 80 1 1		23 0 0	2 12 2	0 14 0						
					{ 90 2 21		29 0 0	3 7 8	1 2 0						
					{ 78 3 9		13 0 0	1 9 0	0 8 0						
					{ 39 1 13		12 0 0	1 7 0	0 7 0						
					{ 50 1 1		17 0 0	2 0 8	0 11 0						
					{ 205 0 2		28 0 0	3 5 9	1 2 0						
					Not surveyed.	21 0 0	150 0 0	18 0 0	6 0 0	221·8	221·8	221·8	221·8		
					Do.	158 8 0	158 8 0	19 0 4	6 5 0	40	40	40	40		
Dawalgarh,	Sili ...	19	Beni Tal ...	1,339 3 0	Do.	158 8 0	158 8 0	19 0 4	6 5 0						
				98 2 38	Do.	10 0 0	10 0 0	1 3 2	0 6 0						
				7,310 3 28	761 2 5	778 8 0	1,031 8 0	123 12 6	40 8 0		591·8	586·8	481·8	481·8	

* Area by grant is 536·0·32 but in 1870, a part of this was exchanged and the existing list of fee simple villages shows what is entered in this column.

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APPENDIX XI.

List of villages in which proprietors had no khudkásht in 1862.

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
<i>Pargana Badhan.</i>			
Karákot ...	1	Bethará.	
	2	Bhagota.	
	3	Khaitoli lagga of Chopta.	
	4	Moli lagga of Kot.	
	5	Lodlá.	
	6	Rains.	
	7	Tunerá	
Khanar ...	8	Bachhuwábán Mallá.	
	9	Bachhuwábán Tallá.	
	10	Jaulchonrá Mallá	
	11	Jaulchonrá Tallá Lagga of Jaulchonrá Mallá.	
	12	Kusráni Talli.	
	13	Kusráni Malli Lagga of Kusráni Talli	
	14	Kusráni Bichli ditto.	
	15	Dasmikagaon ditto.	
	16	Kot.	
	17	Kalchundá Lagga of Kot.	
	18	Nail with Deopuri.	
Nandák ...	19	Walingwár Lagga of Kanol.	
Pindarwár ...	20	Naini Lagga of Bedulá.	
	21	Swán Talla Lagga of Bedulá.	
	22	Ali Lagga of ditto.	
	23	Leguná Lagga of ditto.	
	24	Asoti Lagga of Deorará.	
	25	Kot Lagga of Dewal.	
	26	Kunjájháli Lagga of Majkot.	
	27	Naugaon.	
	28	Rái.	
	29	Sauding Lagga of Tirwákot.	
	30	Bhelá Lagga of Angot.	
	31	Titrákholi Lagga of Angot.	
Pindarpár ...	32	Himni.	
	33	Jhaliyá Lagga of Kheta.	
	34	Oni Lagga of Koti.	
	35	Nandagaon Lagga of Raigaon.	
	36	Majeté Lagga of Angtoli.	
	37	Tuniya Lagga of ditto.	
	38	Taundá ditto.	
	39	Pokhrigwár Lagga of Wodar.	
	40	Rain Lagga of ditto.	
	41	Palwará ditto.	
<i>Pargana Bárahsyún.</i>			
Aswálsyún ...	42	Jaintolgaon Lagga of Dunk.	
	43	Chámi Lagga of ditto.	
	44	Bhairgaon Lagga of Jhatbandi.	
	45	Kurigaon.	
	46	Gwalkot Lagga of Kurigaon.	
	47	Majgaon Lagga ditto.	
	48	Koti ditto	
	49	Munikban Lagga of Mirchorá.	
	50	Riuli Lagga of Sunárgaon.	
	51	Thápla ditto	
	52	Saundul alias Kalán Lagga of Sunárgaon.	
	53	Kandará Lagga of ditto.	
Banelsyún ...	54	Semlya Lagga of Bhandáldu.	
	55	Kolu.	
Bangarhsyún ...	56	Bamangaon Lagga of Dálmí.	
	57	Garh.	
Gagwársyún ...	58	Harsúr (gunth).	
Kandwálsyún ...	59	Churtu.	
	60	Bedulá Lagga of Churtu.	
Kapholsyún ...	61	Nái.	
	62	Pokhri.	
Nándalsyún ...	63	Ghuret Lagga of Pokhri.	
Sitonsyún ...	64	Sígi Lagga of Naugaon.	
	65	Jákh (gunth).	
	66	Setyaná alias Bairágná Lagga of Choprá.	
	67	Airári.	
	68	Baboli Talli and Malli.	
	69	Phulángaon Lagga of ditto.	
	70	Dbandkuráli.	
	71	Chbarpalotá Lagga of Kuiráli.	
<i>Pargana Chánpur.</i>			
Chauthán ...	72	Kapholgaon Bichla Lagga of Bhairgaon.	
	73	Kimauj Lagga of Bagdýalgaon.	

APPENDIX XI.

List of villages in which proprietors had no khudkásht in 1862.—(continued).

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
	74	Kusráni Lagga of Bagdyálgæon	
	75	Dándakhil Lagga of Dáng.	
	76	Dumnikot.	
	77	Ghimdyá Lagga of Dadoli.	
	78	Tolyún Lagga of Jainiti.	
	79	Dáng Lagga of ditto.	
	80	Gwákhil Lagga of Kándai.	
	81	Daulya Lagga of Másaun.	
	82	Jandriya Mallá Lagga of Masaun.	
Choprákot ...	83	Chaprolí Lagga of Buránsi.	
	84	Dumlot Lagga of Bajwár.	
	85	Gheruá.	
	86	Chaplorí Lagga of Mankoli.	
Lohbá ...	87	Hulan Kot Lagga of Bauusár.	
	88	Bhanotgaon ditto	
	89	Ságon Será ditto	
	90	Badiyá Sem.	
	91	Musaun Lagga of Kothar.	
	92	Melchaunri.	
	93	Talgaon.	
Ránigarb ...	94	Gaithi Lagga of Sidoli.	
	95	Baunla Será (Guuth).	
	96	Gwar Walla Lagga of Sunák.	
Sili ...	97	Beri Talli.	
	98	Purnaun Lagga of Bagoli.	
	99	Sirpá.	
	100	Ghatorá Lagga of ditto.	
Tailí ...	101	Dalyáná Lagga of Jakhet.	
	102	Kheti Lagga of Kirsál.	
		<i>Pargana Chaundkot.</i>	
Gurásyún ...	103	Magyadhára Lagga of Kándai.	
	104	Bbadmoli Lagga of Khátyún.	
	105	Dhur Lagga of ditto.	
Jaintolsyún... Kimgaddigád ...	106	Jakholu Lagga of Jaintoli.	
	107	Ubot.	
	108	Khyunká.	
Maundársyún ... Mawálsyún ...	109	Gádsi.	
	110	Surá Lagga of Itosi.	
	111	Kuiráli.	
	112	Kirkhu Lagga of Kota.	
	113	Sirund Lagga of Musású.	
	114	Budoli Lagga of Sáson.	
	115	Chaunra Lagga of Khair.	
Pinglápákhá ...	116	Dalmáná Lagga of Malkot.	
	117	Naula Lagga of ditto.	
Ringwársyún ...	118	Mathchauri Lagga of Kameri.	
		<i>Pargana Dasauli.</i>	
		<i>Nil.</i>	
		<i>Pargana Dewalgarh.</i>	
Bachhausyún ...	119	Gadkoná Lagga of Tenti.	
	120	Kathaitgaon Lagga of Saidalgaon.	
	121	Naugaon Lagga of ditto.	
	122	Sunáon.	
Chalansyún ...	123	Mahargaon Lagga of Sunáon.	
	124	Bará.	
	125	Rautiya.	
Dhanpur ...	126	Ghandiyál.	
	127	Kyárki Lagga of Ghandiyál.	
	128	Swinsará.	
	129	Sumerpur.	
Ghurdoreesyún ...	130	Palho Lagga of Dhárkot.	
	131	Papartoli.	
Kandársyún ...	132	Khandgaon with its Lagga Banskot Sera.	
	133	Khandkhil.	
	134	Sónkar with its Lagga Sálmí.	
	135	Naugaon Lagga of Sílkholá.	
	136	Milai.	
Kathúlsyún ...	137	Barsuri Lagga of Milai.	
	138	Saidal Lagga of Koti.	
		<i>Pargana Gangá Salán.</i>	
Ajmír ...	139	Judá Raulyal.	
	140	Moni Akrá.	
	141	Dálmila Lagga of Náli Chhoti.	
	142	Kakhola Lagga of Badoli.	

APPENDIX XI.

List of villages in which proprietors had no *khudkasht* in 1862—(continued).

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
Karaundú Wallá ...	143	Dumgaon Lagga of Silá Bangaon.	
Langúr ...	144	Pátli Lagga of Badel.	
	145	Khajari Lagga of Bakhrarigaon.	
	146	Kola Lagga of Dyúsá.	
	147	Bhaisogi Lagga of Hatnúr.	
	148	Kátal Lagga of ditto	
	149	Kandású Lagga of Kándá.	
	150	Mangroli.	
	151	Buránsi Lagga of Mangroli.	
	152	Matbárá Lagga of Saundal.	
Mallá Dhángú ...	153	Bani Lagga of Guil.	
	154	Kandwán.	
Tallá Dhangú ...	155	Manjaphá Lagga of Kaindúl.	
	156	Kyár.	
Mallá Udepur ...	157	Gujrará Lagga of Dhaikhál.	
	158	Nail ditto.	
	159	Kumarth.	
Bichlá Udepur ...	160	Jámhgaon.	
	161	Malli Gundi Lagga of Ranchulá.	
	162	Málá Lagga of ditto.	
Tallá Udepur ...	163	Kund Lagga of Kota Tallá.	
		<i>Parganá Mallá Salán.</i>	
Bangársyún ...	164	Búbtá Lagga of Jiwi.	
Dhaundýlsyún ...	165	Nársing.	
Gujrú ...	166	Bbandar.	
	167	Kolainkhánd Wallá Lagga of Bhatiya.	
	168	Duáska Tandolá Lagga of ditto.	
	169	Debtákákhet.	
	170	Bátulá Lagga of Debtákákhet.	
	171	Jamandhár.	
	172	Birkhet Lagga of Jamandhár.	
	173	Sirkhet ditto.	
	174	Kínát Mallá.	
	175	Kinát Tallá Lagga of Kinát Mallá.	
	176	Kolúinkhánd Pallá.	
	177	Kalkhobiyá.	
	178	Manjiará Tallá.	
	179	Maleti Lagga of Manjiará Tallá.	
	180	Manjiará Malla Lagga of ditto.	
	181	Manjiará Pallá.	
	182	Batulá Talla Lagga of Pallá.	
	183	Utirá Mallá.	
	184	Pátal Mallá.	
	185	Pátal Tallá Lagga of ditto.	
	186	Barkhet Mallá Lagga of ditto.	
	187	Barkhet Tallá ditto.	
	188	Bhitákoti Lagga ditto.	
	189	Darkalinko ditto.	
	190	Jagdei Lagga ditto.	
	191	Malla Chaur Lagga of Parsoli.	
	192	Asnún Lagga of Parsoli Walli.	
	193	Kotáki Pinjoli Lagga of ditto.	
	194	Saindhári Zamin ditto.	
	195	Barát Lagga of ditto.	
	196	Parsoli Palli.	
	197	Pinjoli Walli Lagga of Parsoli Palli.	
	198	Chaitakádhár Walla ditto.	
	199	Chaitakádhár Pallá ditto.	
	200	Kathaitgaon Lagga of ditto.	
	201	Kákaun Mallá ditto.	
	202	Saindli Malli.	
	203	Utirá Talli Lagga of ditto.	
	204	Saindli Talli.	
	205	Babiyáni Lagga of Saindli Talli.	
	206	Sunbarmá.	
	207	Kákaun Talla Lagga of Sunbarmá.	
	208	Kochyár Lagga of ditto.	
	209	Jyúndályún Lagga of ditto.	
	210	Ason Pallá Lagga of ditto.	
	211	Kharkoli Lagga of ditto.	
	212	Maindoli Lagga of ditto.	
	213	Kotá Lagga of ditto.	
	214	Pinjoli Walli Lagga of ditto.	
Triyákot ...	215	Bhatyará Lagga of Bhaun.	
	216	Talkandai Lagga of Pipli.	
	217	Pipaldhár ditto.	
	218	Kuiná ditto.	
	219	Warágúd ditto.	
	220	Asnet Pallá Lagga of Asnet Wallá.	

APPENDIX XI.

List of villages in which proprietors had no khudkásht in 1862—(continued).

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
Kolágád ...	221	Katgaon Lagga of Gurindá.	
	222	Patoli Lagga of Gadri.	
Kbáti ...	223	Bhuinchilam with Jhalon.	
	224	Bawásá Mallá.	
	225	Bawásá Tallá.	
	226	Chair.	
	227	Chauri.	
	228	Chandoli Talli.	
	229	Dhaukholi Wallá and Pallá.	
	230	Dhaunr.	
	231	Khetu Lagga of Dhaunr.	
	232	Rangchal Lagga of Dhaunr.	
	233	Ghorpálá Mallá.	
	234	Ghorpálá Tallá.	
	235	Guin Tallá.	
	236	Jámri with its Lagga Chaturi.	
	237	Maharkhola Lagga of Kándá.	
	238	Kotilá.	
	239	Kamdai.	
	240	Langúrbúngi.	
	241	Maitbáná.	
	242	Mahádeo Sain.	
	243	Naugaon.	
	244	Náo.	
	245	Ranihát Lagga of Náo.	
	246	Matkundá Lagga of do.	
	247	Dhisáni Lagga of Páli.	
	248	Timli ditto.	
	249	Sili Malli.	
	250	Siroli.	
	251	Sungriyá.	
	252	Badolgaon Lagga of Sungriyá.	
	253	Tnapá Wallá.	
	254	Taláin.	
Meldhár ...	255	Simkholi.	
Sábli ...	256	Bhainswárá.	
	257	Bbákand.	
	258	Bbarpur Chhotá.	
	259	Chaundlya.	
	260	Churikot.	
	261	Debogi.	
	262	Dublán.	
	263	Garkot.	
	264	Khaldhár.	
	265	Togáon Lagga of Khaldhár.	
	266	Kunjoli.	
	267	Kotli.	
	268	Kakrorá.	
	269	Lakhechauri with Kaphalsár.	
	270	Mási.	
	271	Matkundá.	
	272	Matyalá.	
	273	Pharsúri.	
	274	Ratkot.	
	275	Silá Mallá.	
	276	Arkandai Walli.	
	277	Arkandai Palli.	
	278	Koládaryáo Lagga of Arkandai Palli.	
Saindhár ...	279	Chharkandai.	
	280	Bhainswárá Lagga of Deokandai.	
Taláin ...	281	Masmoli.	
	282	Dyúrári Talli.	
	283	Silet Lagga of Matgal.	
	284	Padyárgaon with Hairadhár.	
		<i>Parganá Nágpur.</i>	
Káliphat Mallá ...	285	Chaundi.	
	286	Kherá Lagga of Chaundi.	
Káliphat Tallá ...	287	Bhatwári.	
	288	Páli Lagga of Bhatwari.	
	289	Páyún ditto.	
	290	Khadgaon ditto.	
	291	Baret.	
	292	Dungar Lagga of Baret.	
	293	Jala ditto.	
	294	Daulá.	
	295	Butolgaon Lagga of Gabingaon.	
	296	Kansili Lagga of Molikansili.	
	297	Paunlyakundlya Lagga of Phegú.	
	298	Singor.	

APPENDIX XI.

List of villages in which proprietors had no khudkásht in 1862.—(continued).

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
Maikhandá ...	299	Gair Malla Lagga of Tirjugi.	
Nággpur Mallá ...	300	Bamyásá.	
	301	Nagar Tangasá.	
	302	Bhadwakuri Lagga of ditto.	
Nággpur Bichla ...	303	Tilphariya Lagga of Pilang Chatolá.	
	304	Bora Talla Lagga of Bijrákot.	
	305	Pithátoli Lagga of Bangthal.	
	306	Kándai Bajeta Lagga of Guniyalá.	
	307	Khál Lagga of Jaurási.	
	308	Talgad Lagga of Jarmwár.	
	309	Kujani Lagga of Kandai.	
	310	Pangroli Lagga of Kimothá.	
	311	Lóngali Lagga of Kunjású.	
	312	Karchhuná Mallá.	
	313	Mahargaon.	
	314	Kolra Rikhwári Lagga of Mastgaon.	
	315	Mayáni.	
	316	Mathyaná Lagga of Semi.	
Nággpur Tallá ...	317	Tameri.	
	318	Belá.	
	319	Khurda Lagga of Bela.	
	320	Barsil.	
	321	Chaund.	
	322	Bhairgaon Lagga of Dhárkot.	
	323	Bhainsgaon Lagga of Khátíyaná.	
	324	Chámak Lagga of Kothgi.	
	325	Darmwári Lagga of Kamera.	
	326	Kándá Lagga of Kyúri.	
	327	Simalgaon Lagga of Lodlá.	
	328	Thalasú Lagga of Syúnd.	
	329	Polá Lagga of Syupuri.	
	330	Tilbára.	
	331	Maitháná Lagga of Tilbára.	
	332	Gund Bhuter ditto.	
	333	Timend.	
<i>Pargana Painkhandá.</i>			
Painkhandá Tallá ...	334	Inrá Lagga of Bargaon.	
	335	Gaunkh Lagga of Silang Marwárá.	
<i>Pargana Talla Salán.</i>			
Badalpur Mallá ...	336	Khandwári Lagga of Badún.	
	337	Bansu.	
	338	Dbundoli Lagga of Kota Mallá.	
	339	Pástá ditto.	
	340	Syálni ditto.	
	341	Málará Bará ditto.	
	342	Jhangoriya dtto.	
	343	Gherwá Tallá Lagga of Toli.	
	344	Chinári Lagga of ditto.	
	345	Makírú ditto.	
Badalpur Tallá ...	346	Mahargaon Lagga of Bhainswará.	
	347	Tamergaon Lagga of Bhainswará.	
	348	Ranorgaon Lagga of Majala.	
	349	Jahari Lagga of Matáli.	
	350	Liunthá Lagga of ditto.	
	351	Paja'ngaon Lagga of Sidhpur.	
Bijlot Wallá ...	352	Dauri Zamin.	
Búngi ...	353	Bawáni.	
	354	Guniyá.	
	355	Gaulá Tallá.	
	356	Gajkholá.	
	357	Kamánd Pallá.	
	358	Chilaun Lagga of Kamand Pallá.	
	359	Betáldungá Lagga of Kumánd.	
	360	Maheli Walli.	
Kauriyá Pallá ...	361	Kurá with Lagga Dhúrá.	
	362	Kbundoli Lagga of Majiná.	
Painon ...	363	Hitoli Lagga of Barkhet Tallá.	
	364	Garkot Lagga of Anet.	
Silá Mallá ...	365	Bhnirgaon.	
	366	Bhadáli Wallá.	
	367	Bhadáli Pallá Lagga of ditto.	
	368	Gajwára Lagga of ditto.	
	369	Byánsi Lagga of ditto.	
	370	Bhánkot ditto.	

APPENDIX XI.

List of villages in which proprietors had no khudkásht in 1862—(concluded).

Name of patti.	Number of village.	Names of villages.	Remarks.
1	2	3	4
	371	Fatepur Tallá Lagga of Bbadáli Wallá	
	372	Choprá Lagga of ditto.	
	373	Saknyáni Lagga of ditto.	
	374	Dhúrá ditto.	
	375	Dandit ditto.	
	376	Borgaon.	
	377	Lohathal Lagga of Dhangaun Tallá and Mallá.	
	378	Bedulá Lagga of Dhargaon.	
	379	Rámkágaon Lagga of Diúl.	
	380	Jadyána.	
	381	Kaldhung Lagga of Jadyána.	
	382	Dhúrá Wallá Lagga of Majolá.	
	383	Almora Lagga of ditto.	
	384	Sendi	
	385	Dhaunr Lagga of Sendi.	
	386	Aitá Lagga of Sendi.	
	387	Silet.	
	388	Tinlyará.	

E. K. PAUW, C.S.,

In charge of the Settlement.

APPENDIX XII.

Comparative table of prices in standard seers per rupee.

Year.	Wheat.	Barley.	Rice (common).	Mandwa.	Remarks.
1	2	3	4	5	6
	S. ch.	S. ch.	S. ch.	S. ch.	
1862...	23 0	23 4	18 0	35 4	
1863...	28 0	33 8	18 8	37 4	
1864...	19 4	24 8	15 0	24 12	
1865...	13 12	27 4	12 4	21 0	
1866...	17 8	20 8	13 8	23 8	
Average	20 5	27 10	15 7	26 6	
1867...	13 8	15 0	12 8	18 4	
1868...	21 5	18 8	18 4	19 12	
1869...	22 0	26 4	15 0	28 8	
1870...	17 14	24 8	14 0	...	
1871...	18 3	22 7	12 6	...	
Average	18 10	21 5	14 7	22 3*	* For three years.
1872...	15 8	18 11	11 2		
1873...	17 12	19 5	14 9		
1874...	17 12	18 14	13 9		
1875...	22 0	22 12	15 5		
1876...	18 0	22 0	14 5		
Average	18 3	20 5	13 12		
1877...	13 15	16 10	10 3		
1878...	13 5	15 5	8 15		
1879...	14 7	18 5	11 12		
1880...	16 1	19 1	12 5		
1881...	18 14	20 11	13 2		
Average	15 5	13 0	11 4		
1882...	22 8	25 13	16 7		
1883...	20 4	21 11	15 11		
1884...	15 5	18 8	12 13		
1885...	16 12	20 8	11 9		
1886...	15 15	19 11	11 0		
Average	18 2	21 4	13 8		
1887...	15 10	20 6	12 5	22 9	
1888...	14 2	18 4	11 5	20 1	
1889...	17 4	20 4	12 1	23 3	
1890...	14 7	18 1	11 3	21 0	
1891...	12 9	16 11	9 2	16 9	
Average	14 13	18 12	11 3	20 11	
1892...	9 6	12 12	6 13	12 9	
1893...	11 4	13 4	9 0	16 14	
1894...	12 12	18 0	8 0	19 0	
1895...	10 0	16 4	7 0	16 6	
Average	10 13	15 1	7 11	16 3	

E. K. PAUW, C.S.,

In charge of the Settlement.

APPENDIX XIII.

Statement showing monthly rainfall since 1862 at the various raingauge stations in the district of Garhwál.

Year.	January.						February.						March.					
	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1862	2.3	1.7	...	...	...	...	...	...	...	...	...	...	2.0	3.7	...	...	...	...
1863	3.9	2.7	...	...	...	...	...	1	...	...	...	...	3.2	2.6	...	...	...	...
1864	1.4	1.3	...	...	...	...	2.6	2.4	...	...	...	...	.9	.6	...	...	...	...
1865	2.7	1.7	...	...	...	...	4.5	5.4	...	...	...	...	6.7	5.6	...	...	...	...
1866	5.7	4.3	...	...	...	...	2.9	2.8	...	...	...	...	...	...	...	...	...	...
1867	.9	.4	...	...	...	...	.7	3.0	...	...	...	...	1.1	.7	...	...	...	...
1868	4.0	3.9	...	...	...	...	7.7	7.9	...	...	...	...	3.6	3.6	...	...	...	...
1869	1.9	1.6	...	...	...	...	1.5	1.0	...	...	...	...	8.2	7.6	...	...	...	...
1870	.2	.3	...	...	...	...	1.8	1.4	...	...	...	...	5.4	4.8	...	...	...	...
1871	...	...	...	...	...	...	4.5	5.0	...	...	...	...	...	...	...	...	...	...
1872	7.1	6.4	...	...	...	...	3.9	3.4	...	...	...	...	2.8	1.7	...	...	...	...
1873	.7	1.3	...	...	...	...	.6	.4	...	...	...	...	2.7	2.8	...	...	...	...
1874	1.0	3.5	...	...	...	...	5.4	3.4	...	...	...	...	2.2	3.6	...	...	...	...
1875	.1	.4	...	...	...	...	3.5	5.6	...	...	...	...	.3	...	...	...	...	...
1876	1.0	.6	...	...	...	...	.8	.8	...	...	...	...	1.6	1.5	...	...	...	...
1877	4.3	3.1	...	...	...	...	5.0	3.7	...	...	...	...	5.7	6.3	...	...	...	...
1878	4.2	3.9	...	...	...	...	2.5	1.7	...	...	...	...	1.3	.7	...	...	...	...
1879	.3	1.8	...	...	...	...	3.3	2.8	...	...	...	...	2.8	5.0	...	...	...	...
1880	...	...	...	...	...	...	3.8	3.3	...	...	...	...	...	.2	...	...	...	...
1881	.50	...	...	...	...	...	1.90	1.60	...	...	...	...	4.20	3.20	...	...	...	...
1882	2.20	2.00	3.88	6.72	3.29	...	3.30	3.00	.12	5.27	5.21	...	.20	.20	.75	1.83	1.20	...
1883	3.51	4.40	4.36	6.01	5.10	...	...	...	...	...	...	...	3.46	2.90	4.54	5.42	4.62	...
1884	...	...	...	.16	.10	...	.87	.60	.40	4.28	1.96	...	1.32	1.40	.53	5.64	5.35	...
1885	6.34	6.30	7.26	11.03	8.98	...	.74	1.00	1.28	2.58	2.46	...	.69	...	.48	2.43	1.45	...
1886	2.37	3.00	3.50	6.09	4.34	...	1.65	3.20	1.56	4.25	2.58	...	4.86	4.40	3.57	6.20	3.50	...
1887	3.07	2.27	3.29	5.43	4.75	...	.05	...	.15	.33	.30	...	.84	.61	1.72	4.16	.70	...
1888	2.12	1.45	1.80	2.01	2.95	...	1.35	1.17	1.24	2.66	1.74	...	1.16	.77	1.44	2.42	1.85	...
1889	5.37	5.41	5.50	6.99	5.71	...	4.51	3.05	2.80	6.22	5.62	...	.15	.10	.66	1.29	3.45	...
1890	1.69	1.27	1.40	Not available	...	...	.55	.44	1.32	Not available	...	...	1.61	1.99	.64	Not available	...	...
1891	2.39	1.32	3.83	...	4.87	...	4.07	3.63	4.61	9.47	5.43	...	1.96	1.49	1.96	5.13	3.34	...
1892	.23	.11	.69	.50	.96	.23	2.77	2.44	1.81	2.40	1.58	1.96	.09	...	.01	.62	.89	...
1893	4.78	3.92	2.85	1.46	4.57	4.13	6.94	5.25	4.98	.45	7.32	5.56	3.14	2.92	4.66	6.32	3.81	4.1
1894	3.12	3.08	3.55	5.12	3.87	3.12	3.47	3.13	3.14	7.27	6.43	1.66	3.09	1.13	3.11	5.65	4.10	2.5
1895	5.38	4.23	4.49	4.88	5.41	4.00	3.12	1.47	1.26	3.27	2.05	1.31	1.00	.96	1.49	3.61	1.72	4.5
Total	84.78	78.96	46.70	56.40	61.00	11.48	90.29	84.08	24.57	48.45	42.68	10.43	78.27	72.47	24.91	59.75	36.51	4.3
Average	2.49	2.32	3.34	4.34	4.15	2.87	2.65	2.47	1.75	3.72	3.27	2.61	2.36	2.13	1.78	3.10	2.81	1.21

APPENDIX XIII.

Statement showing monthly rainfall since 1862 at the various raingauge stations in the district of Garhwál—(continued).

Year.	April.						May.						June.						
	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
1862	..	·7	·3	..	..	..	2·4	3·3	..	..	..	..	8·2	6·8	..	..	..	..
1863	..	1·9	·8	..	..	..	1·0	·5	..	..	..	..	8·8	8·2	..	..	..	..
1864	..	1·1	·3	..	..	..	4·3	4·1	..	..	..	..	·4	1·5	..	..	..	..
1865	..	·8	·5	..	..	..	5·3	3·8	..	..	..	..	1·4	1·4	..	..	..	..
1866	..	1·4	1·5	..	..	..	..	..	..	..	..	..	4·2	4·1	..	..	..	..
1867	..	1·3	1·1	..	..	..	2·7	1·7	..	..	..	..	1(·)	8·5	..	..	..	..
1868	..	1·0	1·9	..	..	..	1·7	1·9	..	..	..	..	2·0	2·7	..	..	..	..
1869	..	·3	·7	..	..	..	..	..	..	..	..	..	1·0	1·8	..	..	..	..
1870	..	2·6	1·5	..	..	..	·5	·6	..	..	..	..	4·3	4·9	..	..	..	..
1871	..	1·5	1·8	..	..	..	8·2	6·0	..	..	..	..	12·8	9·1	..	..	..	..
1872	..	1·4	·9	..	..	..	2·3	1·4	..	..	..	..	2·2	4·4	..	..	..	..
1873	·3	..	..	..	5·1	3·0	..	..	..	..	1·5	1·1	..	..	..	..
1874	..	·2	·3	..	..	..	..	..	..	..	..	..	8·2	8·0	..	..	..	..
1875	·1	..	..	..	5·2	3·5	..	..	..	..	4·1	3·0	..	..	..	..
1876	..	1·9	1·6	..	..	..	1·8	1·5	..	..	..	..	·8	2·6	..	..	..	..
1877	..	2·8	·6	..	..	..	7·6	2·5	..	..	..	..	5·6	5·6	..	..	..	..
1878	..	2·9	3·1	..	..	..	2·9	2·1	..	..	..	..	1·1	·7	..	..	..	..
1879	..	·3	..	..	..	..	·3	·2	..	..	..	..	1·6	1·8	..	..	..	..
1880	..	·2	·2	..	..	..	2·1	6·0	..	..	..	..	3·2	5·5	..	..	..	..
1881	..	1·70	1·00	..	..	..	2·70	1·90	..	..	..	..	3·60	5·50	..	..	..	..
1882	..	1·90	·80	2·90	3·52	2·63	3·40	2·40	5·58	5·99	4·11	..	8·50	6·70	8·89	5·88	6·13	..	
1883	..	·35	·30	1·67	3·09	2·49	3·26	1·90	2·20	4·92	2·20	..	3·34	1·70	3·07	2·46	8·10	..	
1884	..	·16	·20	·10	·67	1·14	·96	·90	·30	1·37	1·67	..	5·10	6·20	2·47	3·30	8·76	..	
1885	..	·87	..	1·03	2·05	1·40	2·23	3·50	2·64	5·21	2·79	..	7·37	7·86	8·08	3·98	5·84	..	
1886	..	·15	·10	·72	·96	1·53	3·28	4·30	3·34	3·57	5·44	..	6·65	2·80	5·66	3·01	4·25	..	
1887	..	·68	·55	1·53	2·20	1·65	..	·30	·90	·88	4·37	..	1·20	1·70	2·09	3·54	5·46	..	
1888	..	·01	·70	..	2·17	·83	1·74	2·55	2·96	3·99	4·69	..	1·98	·95	1·75	1·50	4·83	..	
1889	..	·90	·15	1·18	·49	1·03	1·02	·70	·80	4·02	2·40	..	7·57	7·10	12·99	3·10	18·24	..	
1890	..	1·91	1·04	1·29	Not available	..	1·36	·48	·16	Not available.	..	..	6·40	7·80	9·79	Not available	..	..
1891	..	·36	·06	·35	2·33	·76	2·48	2·03	1·00	1·50	1·30	..	1·89	2·01	3·48	·80	3·57	..	
1892	..	·21	·20	·84	1·61	·57	·28	·20	·61	1·80	1·69	·36	2·34	1·75	2·87	1·26	4·24	4·82	
1893	..	1·61	1·90	·74	1·09	1·66	1·54	4·12	3·18	7·01	3·12	4·46	2·66	4·49	2·12	12·49	6·25	14·83	21·25
1894	..	·28	·51	·08	·71	·61	·32	·15	·71	·53	·49	·24	11·62	9·44	10·95	4·31	12·71	15·07	
1895	..	3·14	1·62	1·98	2·64	1·65	2·46	·44	·37	1·86	1·43	3·31	1·41	9·44	7·26	8·16	3·96	10·81	12·93
Total	..	37·15	26·63	14·35	23·46	17·95	400	80·99	66·96	30·10	38·33	38·92	4·62	163·39	152·62	92·74	43·35	107·77	54·97
Average	..	1·09	7·83	1·02	1·89	1·38	1·00	2·38	1·97	2·15	2·95	2·99	1·15	4·30	4·19	6·62	3·33	8·29	13·74

APPENDIX XIII.

Statement showing monthly rainfall since 1862 at the various raingauge stations in the district of Garhwal—(continued).

Year.	July.						August.						September.					
	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.
1	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
1862 ...	11.6	9.4	...	...	...	...	15.3	5.8	...	...	...	...	4.6	3.4	...	...	...	...
1863 ...	20.7	13.8	...	...	...	...	7.1	3.7	...	...	...	...	1.1	.2	...	...	...	...
1864 ...	7.0	5.1	...	...	...	...	12.2	5.1	...	...	...	...	7.5	4.1	...	...	...	...
1865 ...	4.5	4.8	...	...	...	...	4.0	6.2	...	...	...	...	7.5	3.9	...	...	...	...
1866 ...	23.0	12.9	...	...	...	...	17.8	12.8	...	...	...	...	1.8	.2	...	...	...	...
1867 ...	11.9	7.7	...	...	...	...	12.3	8.3	...	...	...	...	3.8	2.0	...	...	...	...
1868 ...	9.6	9.6	...	...	...	...	7.0	6.3	...	...	...	...	3.3	1.5	...	...	...	...
1869 ...	10.1	8.6	...	...	...	...	8.1	3.2	...	...	...	...	6.8	3.8	...	...	...	...
1870 ...	15.8	7.9	...	...	...	...	13.3	9.6	...	...	...	...	3.4	2.4	...	...	...	...
1871 ...	18.7	11.6	...	...	...	...	6.1	4.4	...	...	...	...	2.0	1.1	...	...	...	...
1872 ...	18.5	7.6	...	...	...	...	12.7	5.4	...	...	...	...	7.5	1.6	...	...	...	...
1873 ...	12.2	10.4	...	...	...	...	1.6	1.7	...	...	...	...	12.5	5.5	...	...	...	...
1874 ...	14.9	9.7	...	...	...	...	17.6	10.7	...	...	...	...	6.7	5.3	...	...	...	...
1875 ...	13.5	8.9	...	...	...	...	12.3	7.5	...	...	...	...	10.1	5.4	...	...	...	...
1876 ...	11.1	5.3	...	...	...	...	10.2	5.0	...	...	...	...	6.1	3.4	...	...	...	...
1877 ...	6.2	2.6	...	...	...	...	3.6	3.2	...	...	...	...	.7	.4	...	...	...	...
1878 ...	13.2	9.9	...	...	...	...	9.9	8.9	...	...	...	...	1.8	.3	...	...	...	...
1879 ...	14.2	9.4	...	...	...	...	23.8	18.5	...	...	...	...	4.5	2.2	...	...	...	...
1880 ...	11.9	8.1	...	...	...	...	5.1	2.0	...	...	...	...	18.2	17.0	...	...	...	...
1881 ...	12.50	6.50	...	...	...	...	12.30	14.30	...	...	...	...	4.20	2.30	...	...	...	...
1882 ...	22.80	11.50	14.80	10.33	18.07	...	12.10	8.30	20.56	7.74	25.53	...	.50	.60	1.46	2.13	7.37	...
1883 ...	9.44	6.40	9.43	10.25	14.63	...	7.15	6.40	10.83	9.33	26.45	...	2.12	2.80	4.22	11.40	16.90	...
1884 ...	13.24	5.20	12.46	8.03	31.12	...	22.48	16.10	15.85	3.99	13.63	...	9.03	8.60	7.55	7.77	9.93	...
1885 ...	12.02	9.80	11.02	8.15	.50	...	16.94	13.20	11.61	5.11	22.00	..	1.09	1.70	.63	2.15	2.57	...
1886 ...	13.36	9.40	14.35	6.60	27.23	...	10.30	9.60	18.53	10.49	31.34	...	1.26	3.90	8.92	4.19	10.45	...
1887 ...	9.83	10.01	15.07	9.43	22.60	...	14.74	8.95	17.79	5.68	17.20	...	3.96	3.05	3.08	2.54	7.03	...
1888 ...	15.00	9.13	14.85	9.78	28.92	...	9.92	5.45	10.76	4.11	21.46	...	9.53	7.85	9.41	5.84	13.55	...
1889 ...	12.07	10.00	16.40	7.72	26.33	...	16.99	11.89	27.97	9.69	33.53	...	1.79	2.00	3.48	1.41	11.63	...
1890 ...	18.00	10.70	11.12	Not available.	...	...	14.40	9.69	11.04	Not available.	...	...	5.40	2.44	5.06	Not available.	...	...
1891 ...	6.99	4.04	8.84	9.92	17.95	...	21.23	14.74	14.92	9.58	20.16	...	3.75	1.65	4.52	3.05	7.84	...
1892 ...	11.82	10.94	14.65	6.23	19.86	22.38	17.53	21.27	20.50	8.72	25.76	37.57	4.14	3.66	12.15	5.99	13.84	11.45
1893 ...	18.33	9.76	9.51	5.36	14.61	20.23	8.75	4.90	7.09	7.04	21.13	19.63	12.45	8.30	11.15	5.44	11.84	26.88
1894 ...	27.58	16.48	22.50	5.93	23.02	45.36	20.16	9.66	12.63	6.86	23.51	41.32	6.82	...	6.60	3.24	8.30	8.93
1895 ...	11.13	7.56	9.68	6.46	30.70	18.43	16.13	10.52	13.34	11.25	23.79	32.53	2.54	1.62	4.08	3.11	8.31	7.84
Total ...	462.71	300.72	184.77	104.19	276.44	106.40	423.82	293.27	212.52	99.59	305.49	131.05	178.48	114.17	82.31	58.26	128.46	53.95
Average,	13.61	8.84	13.20	8.01	21.26	26.60	12.46	8.62	15.18	7.66	23.50	32.76	5.25	3.36	5.88	4.48	9.82	13.49

APPENDIX XIII.

Statement showing monthly rainfall since 1862 at the various raingauge stations in the district of Garhwál—(continued).

Year.	October.						November.						December.					
	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.	Pauri.	Srinagar.	Karnprayág.	Joshimath.	Ukhimath.	Kotdwára.
1	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
1862 ...	1·4	·4	...	...	...	...	...	...	...	...	...	...	·1	...	...	...	...	...
1863 ...	·6	·3	...	...	...	...	1·9	·8	...	...	...	...	·9	·8	...	...	...	...
1864 ...	...	·1	...	...	...	...	...	...	...	...	...	...	·1	...	...	...	...	...
1865 ...	...	...	...	...	...	...	...	...	...	...	...	...	1·1	2·3	...	...	...	...
1866 ...	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1867 ...	...	·7	...	...	...	...	...	...	...	...	...	...	·4	·2	...	...	...	...
1868 ...	...	...	...	...	...	...	...	...	...	...	...	...	·4	·5	...	...	...	...
1869 ...	5·5	4·8	...	...	...	...	...	...	...	...	...	...	·9	·7	...	...	...	...
1870 ...	...	·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1871 ...	...	...	...	...	...	...	...	...	...	...	...	...	·8	·4	...	...	...	...
1872 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1873 ...	...	·2	...	...	...	...	...	...	...	...	...	...	·7	1·6	...	...	...	...
1874 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1875 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1876 ...	2·8	1·7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1877 ...	·4	·9	...	...	...	...	·1	...	...	...	...	...	4·5	3·6	...	...	...	...
1878 ...	...	...	...	...	...	...	...	...	...	...	...	...	·1	·2	...	...	...	...
1879 ...	·8	·7	...	...	...	...	...	...	...	...	...	...	·2	·3	...	...	...	...
1880 ...	...	...	...	...	...	...	2·0	1·5	...	...	...	...	...	...	...	...	...	...
1881 ...	·10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1882 ...	...	...	...	...	·20	...	·70	·30	·20	·10	·90	...	...	...	...	...	...	...
1883 ...	...	...	...	·60	1·00	...	1·48	2·20	1·10	1·51	1·73	...	·12	·10	·30	1·66	·92	...
1884 ...	3·44	·80	·29	2·43	·52	...	...	...	...	·15	·25	...	·17	·20	...	·18	...	...
1885 ...	...	...	·07	·28	·08	...	...	...	...	...	...	...	2·77	2·40	1·35	1·95	1·80	...
1886 ...	·67	1·00	2·25	·82	2·52	...	...	...	·12	·05	...	...	·25	·43	·52	1·62	1·10	...
1887 ...	·32	...	·85	·21	·28	...	...	·20	·08	·15	·20	...	·24	·10	·22	·29	·21	...
1888 ...	·06	...	·19	1·12	·40	...	1·54	1·85	2·15	2·68	2·31	...	·30	...	...	·11	·09	...
1889 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1890 ...	...	·05	·07	Not available.	...	...	...	...	...	Not available.	...	...	1·55	1·31	1·38	Not available.	...	...
1891 ...	4·44	3·93	1·57	2·91	3·03	...	...	·24	...	·20	...	...	...	...	...	...	...	...
1892 ...	...	...	...	...	·03	...	...	...	...	·16	·35	...	·10	...	·02	·04	...	·45
1893 ...	5·70	5·19	8·32	7·43	7·01	4·65	1·00	·41	·66	1·31	·93	·19	...	...	...	·50	·08	...
1894 ...	4·80	3·94	4·97	3·56	5·13	3·23	·61	·61	·63	1·34	·82	1·82	3·37	2·57	3·01	5·58	3·57	2·52
1895 ...	·23	·21	·09	·15	·12	...	·20	·08	·12	·29	·09	·03	...	...	·11	·23	...	...
Total ...	31·26	26·02	18·67	19·51	20·32	7·88	9·56	8·19	5·06	7·94	7·58	2·04	19·07	17·71	6·91	12·16	7·77	2·97
Average,	·92	·77	1·33	1·50	1·56	1·97	·28	·24	·36	·61	·58	·51	·56	·52	·49	·93	·59	·74

APPENDIX XIII.

Statement showing monthly rainfall since 1862 at the various raingauge stations in the District of Garhwál—(concluded).

Year.						Total.					
						Paori.	Srinagar.	Karnprayag.	Joshimath.	Ukhimath.	Kotdwára.
1						74	75	76	77	78	79
1862	...	...	...	...	...	48·6	34·8	...	...	...	...
1863	...	...	...	...	...	51·1	34·5	...	...	...	...
1864	...	...	...	...	...	37·5	24·6	...	...	...	...
1865	...	...	...	...	...	38·5	35·6	...	...	...	...
1866	...	...	...	...	...	56·8	38·7	...	...	...	...
1867	...	...	...	...	...	45·6	34·3	...	...	...	...
1868	...	...	...	...	...	40·9	39·8	...	...	...	...
1869	...	...	...	...	...	44·3	33·8	...	...	...	...
1870	...	...	...	...	...	47·3	33·5	...	...	...	...
1871	...	...	...	...	...	54·6	39·4	...	...	...	...
1872	...	...	...	...	...	58·4	32·8	...	...	...	...
1873	...	...	...	...	...	37·6	28·3	...	...	...	...
1874	...	...	...	...	...	56·2	44·5	...	...	...	...
1875	...	...	...	...	...	49·1	34·4	...	...	...	...
1876	...	...	...	...	...	38·1	24·0	...	...	...	...
1877	...	...	...	...	...	46·5	32·5	...	...	...	...
1878	...	...	...	...	...	39·6	31·5	...	...	...	...
1879	...	...	...	...	...	52·1	42·7	...	...	...	...
1880	...	...	...	...	...	46·5	43·8	...	...	...	...
1881	...	...	...	...	...	46·70	36·30	...	...	...	...
1882	...	...	...	...	...	55·60	35·80	59·27	49·51	75·44	...
1883	...	...	...	...	...	34·23	29·10	42·02	56·65	83·13	...
1884	...	...	...	...	...	56·77	40·20	39·95	37·97	74·43	...
1885	...	...	...	...	...	51·06	45·70	45·45	44·92	49·87	...
1886	...	...	...	...	...	44·80	42·13	63·04	47·85	94·28	...
1887	...	...	...	...	...	34·93	27·74	46·77	34·84	64·75	...
1888	...	...	...	...	...	44·71	31·87	46·55	38·39	83·62	...
1889	...	...	...	...	...	50·37	40·40	71·18	40·93	107·94	...
1890	...	...	...	...	...	52·87	37·60	43·21	...	...	...
1891	...	...	...	...	...	49·56	36·44	44·02	44·91	68·75	...
1892	...	...	...	...	...	39·51	40·57	54·15	29·33	68·87	79·2
1893	...	...	...	...	...	71·34	47·85	69·49	45·68	92·28	107·9
1894	...	...	...	...	...	85·28	50·70	71·88	50·10	92·56	136·6
1895	...	...	...	...	...	52·75	35·90	46·66	41·31	87·96	81·13
Total						1,659·78	1,241·80	743·64	562·39	1,043·88	333·9
Average						48·82	36·52	53·12	43·26	80·30	98·45

APPENDIX XIV.
Statement (1) giving details of expenditure incurred on the Survey of Garhwal as returned by Survey Department.

Year.	Traverse.	Cadastral.	Record writing	Loss sustained on importation of supplies.	Completion of maps.	Printing of village names, &c., in English on maps.	Grand Total.	Remarks.
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1889-90	12,244 10 7	8,235 0 0	...	...	...	...	20,479 10 7	
1890-91	27,710 4 3	49,925 2 4	3,541 7 3	...	...	...	81,176 13 10	
1891-92	17,479 11 8	42,302 3 1	30,347 14 1	...	...	...	90,129 12 10	
1892-93	2,949 8 9	45,125 5 10	28,970 10 0	236 6 0	...	...	77,281 14 7	
1893-94	457 3 8	24,944 0 0	20,462 0 3	...	...	1,138 0 0	47,001 3 11	
1894-95	...	...	...	...	6,327 7 0	...	6,327 7 0	
1895—the close of August 1896.	...	...	...	...	1,308 8 6	...	1,308 8 6	
Total	60,841 6 11	1,70,531 11 3	93,321 15 7	236 6 0	7,635 15 6	1,138 0 0	3,23,705 7 3	

E. K. PAUW, C.S.,
In charge of the Settlement.

APPENDIX XIV.

Statement (2) showing the charges incurred in settlement operations in the district of Garhwál.

Budget head.	Items.	Total amount expended up to end of August 1896.	Preparation of records.	Extra Deputy Collector's Court.	Assessment.	
					Of cadastrally surveyed pattia.	Of non cadastrally surveyed pattia.
1	2	3	4	5	6	7
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Salaries	Settlement Officer, 3rd grade.	3,150 0 0	...	...	3,150 0 0	...
	Settlement Deputy Collector.	28,642 9 9	18,949 3 1	9,693 6 8	...	...
	Total salaries ...	31,792 9 9	18,949 3 1	9,693 6 8	3,150 0 0	...
Fixed establishment.	Clerks on less than Rs. 200.	17,726 3 1	8,000 5 7	4,225 3 6	5,500 10 0	...
	Servants and guards	1,316 12 7	666 12 7	650 0 0	...	...
Temporary establishment.	Clerks ...	1,08,648 1 5	86,689 5 11	...	20,247 3 3	1,717 8 3
	Servants ...	267 0 0	267 0 0	...	...	...
	Extra tour establishment.	299 1 9	276 13 8	...	22 4 1	...
Variable establishment.	Field Superintendents (Peshkars).	2,085 0 0	2,085 0 0	...	...	...
	Field Amins ...	2,175 15 4	2,165 15 4	...	...	10 0 0
	Outdoor servants Mir-dhas.	1,703 12 5	1,703 12 5	...	...	...
	Total establishment ...	1,34,221 14 7	1,01,849 1 8	4,875 3 6	25,770 1 4	1,727 8 3
Allowances.	Travelling allowance of officers.	6,355 2 10	4,129 0 0	1,866 2 10	...	360 0 0
	Travelling allowance of establishment.	2,070 14 0	1,060 5 0	704 9 0	306 0 0	...
	Total allowances ...	8,426 0 10	5,189 5 0	2,570 11 10	306 0 0	360 0 0
Supplies and services.	Cost of instruments and their repairs.	104 15 0	104 15 0	...	...	...
	Charges for the services of process of the Settlement Department.	3,731 6 4	3,687 6 4	...	...	44 0 0
	Job work ...	1,252 12 3	1,252 12 3	...	...	...
	Total supplies and services.	5,089 1 7	5,045 1 7	...	...	44 0 0
Contingencies.	Country stationery ...	15,340 0 2	13,101 11 7	124 8 10	1,886 15 9	226 12 0
	Purchase of tents ...	489 11 10	489 11 10	...	...	...
	Carriage of tents ...	9,441 9 8	4,865 8 0	986 12 0	2,639 5 8	950 0 0
	Purchase of office furniture.	1,173 1 11	1,016 12 11	...	166 5 0	...
	Telegram charges ...	35 4 0	23 4 0	2 0 0	10 0 0	...
	Postage charges ...	671 5 6	223 1 0	123 1 6	300 3 0	25 0 0
	Cash postage and registry charges.	333 2 3	175 9 0	12 3 6	130 5 9	16 0 0
	Miscellaneous contingencies of fixed establishment.	2,870 3 7	1,738 2 7	...	1,132 1 0	...
	Miscellaneous contingencies of field establishment.	232 8 0	207 8 0	...	...	25 0 0
	Total contingencies ...	30,586 14 11	21,841 4 11	1,246 9 10	6,255 4 2	1,241 12 0
	Grand Total ...	2,10,116 9 8	1,52,874 0 1	18,387 15 10	35,481 5 6	3,373 4 3
	Settlement office building	9,400 0 0	9,400 0 0	...	...	...
	Grand Total ...	2,19,516 9 8	1,62,274 0 1	18,387 15 10	35,481 5 6	3,373 4 3

E. K. PAUW, C.S.,

In charge of the Settlement.

R E S O L U T I O N .

R E V E N U E D E P A R T M E N T .

Dated Allahabad, the 8th December 1898.

READ—

Letter from the Joint Secretary to the Board of Revenue, North-Western Provinces and Oudh, No. 3412N., dated 13th October 1898, submitting, with the remarks of the Board, the Final Report on the Revision of Settlement in the Garhwál District, by Mr. E. K. Pauw, I.C.S., together with the review of the Commissioner, Kumaun Division, thereon.

OBSERVATIONS.—The district of British Garhwál (as distinguished from the Native State of Garhwál or Tehri) lies between north latitude $29^{\circ} 26' 10''$ and $31^{\circ} 5' 0''$ and east longitude $78^{\circ} 12' 0''$ and $80^{\circ} 6' 20''$. It occupies an area of 5,471 square miles, and lies between Hundes or Thibet, the Tehri-Garhwál State, and the British districts of Bijnor, Almora, and Naini Tal. Excepting the narrow strip of country at the foot of the hills known as the Bhábar, and a few valleys in the sandstone formations

Paragraph 1.

between the Himalaya proper and the plains, the whole area of the district consists of deep gorges and steep hillsides. In no place is there an unbroken stretch of so much as a square mile of even approximately level land. The height above sea level ranges from 1,000 feet to 25,660, and the variety of climate is consequently very great.

Paragraph 2.

The excellent maps appended to Mr. Pauw's report exhibit clearly the physical configuration of the district.

For administrative purposes the district is divided into eleven parganas and 86 *pattis*, some of the latter being very minute. Out of the vast total area of 5,471 square miles, only 451 are cultivated. The Bhutia parganas forming the northern portion of the district consist mainly of huge mountains and glaciers.

Paragraph 12.

2. The population is said to number 407,818, giving a density of nearly 903 to the cultivated square mile.

Paragraph 69.

About twelve-sixteenths of the cultivated area are held by the proprietors, three-sixteenths by tenants with rights of occupancy under local custom, and one-sixteenth by tenants-at-will.

3. The food crops produced in the district are, for the most part, locally consumed by the inhabitants, who are largely dependent for their subsistence on other sources than agriculture.

Paragraph 31.

The pilgrim traffic trade with Tibet and the Bhábar, cattle breeding, labour in the reserved forests, and domestic service in the hill stations—all contribute to the prosperity of the Garhwáli.

Paragraphs 25—31.

The people are quiet and peaceful, crime is almost unknown, and, except in the towns of Srinagar and Kotdwara, and certain places on the pilgrim route during the busy season, the services of regular police are not required.

The Lieutenant-Governor and Chief Commissioner is glad to read Mr. Pauw's testimony to the growing prosperity of the people, in spite of the increased assessments of the last two settlements.

The mass of the people, it is said, live in greater comfort, not to say luxury, than at any previous time, the general rise in the standard of comfort being visibly expressed by the marked improvement in the construction of dwelling houses.

Paragraph 78.

4. Rent-rolls, such as are universal in the plains, are not maintained in hill villages, and there are few true rents. The Settlement Officer, therefore, could not pretend to work out an assessment based, in the ordinary way, on a fixed proportion of agricultural assets. His endeavours were rather directed to the fixation of an equitable quit rent with regard to all the circumstances of each village. In pursuit of this object, Mr. Pauw spared no labour or fatigue in the necessary work of inspection, and the Lieutenant-Governor and Chief Commissioner agrees with the Board of Revenue that the results of such conscientious, minute, and skilled enquiry may be accepted with confidence.

Commissioner's paragraph 11, &c.

Paragraph 102.

Paragraph 90.

5. The experiment of introducing an elaborate system of cadastral survey into the villages of unsophisticated hillmen may now be admitted to have been a costly mistake. Owing to that mistake, the cost of the operations has been very high, nearly $5\frac{1}{2}$ lakhs, or about eleven times the annual increase of revenue obtained. Except two whole parganas (Dasauli and Painkhanda) and parts of two others (Badhan and Nagpur), the district was cadastrally surveyed at enormous cost. The cadastrally surveyed portions cost Rs. 5,30,448, the area surveyed being approximately 952 square miles, while the portions which were spared the elaborate cadastral survey, the assessable area of which was 39 square miles, cost only Rs. 3,373 to settle. The incidence of cost was Rs. 557 per square mile in the former case, and Rs. 86 in the latter. A cadastral survey for fiscal purposes is useless, unless annual records are kept up, and the maintenance of such records is impracticable in Kumaun. The total enhancement to be obtained by the revision of settlement had been determined prior to the commencement of operations, and consequently no pecuniary benefit could be obtained from the costly procedure of the cadastral survey.

Paragraph 83, and Board's letter.

For practical purposes the rough and ready methods followed in the tracts which were not cadastrally surveyed (paragraphs 108—112 of Mr. Pauw's report) were as effective as the more elaborate methods adopted in the cadastrally surveyed parganas.

Paragraph 137. Sir Antony MacDonnell notices with satisfaction the high praise bestowed by the Settlement Officer on the work of the Survey Department.

6. The lessons in regard to settlement work in the Kumaun Division to be learned from the experience of the Garhwál Settlement are summarized in the fifth paragraph of the Board's letter, with which the Lieutenant-Governor and Chief Commissioner concurs. Instructions in accordance with the principles enunciated have lately been issued by the Board, with the approval of Government, for the settlement of pargana Shor, in the Almora district.

7. His Honor agrees with the Board that the settlement now made should run for thirty years, and is pleased accordingly to sanction it for the term of thirty years, subject to the amendment of the settlement engagements concerning the furnishing of supplies, referred to in paragraph 6 of the Board's letter.

8. Mr. Pauw's lucid and well written report will continue to be for many years the standard work of reference for all information concerning the Garhwál district.

The Lieutenant-Governor and Chief Commissioner has much pleasure in expressing his agreement with the opinion of the Board that Mr. Pauw has performed his difficult duty with uncommon industry and ability.

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

J. O. MILLER,

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