SELECTIONS FROM THE RECORDS OF THE BOMBAY GOVERNMENT.

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PAPERS

RELATING TO THE

REVISION OF THE RATES OF ASSESSMENT ON THE EXPIRATION OF THE FIRST SETTLEMENT

IN THE

OLD BANKÁPUR TALUKA

OF THE

DHARWAR COLLECTORATE.

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INDEX TO THE CORRESPONDENCE ON THE REVISION SETTLEMENT OF 137 VILLAGES OF THE OLD BANKÁPUR TÁLUKA OF THE DHÁRWÁR COLLECTORATE.

No. 7 of 1876.

From

Colonel W. C. ANDERSON,
Survey and Settlement Commissioner, S.D.;

To

The SECRETARY to GOVERNMENT,
Revenue Department.

Survey Commissioner's Office,
Bangalore, 4th January 1876.

Sir,

I have the honour to forward the following proposals for the revision of the assessment of one hundred and thirty-seven (137) villages of the old Bankápur Táluka of the Dhárwár Collectorate, the current settlement of which expires in the present year. The original settlement of these one hundred and thirty-seven villages was introduced by Captain Wingate in the years 1846-47, and was sanctioned by Government letter No. 5007 of the 3rd December 1847. A copy of the original settlement report and its appendices and the consequent correspondence is appended to this letter. The village of Byahatti of the Hubli Táluka the settlement of which expires in the present year, is also included in the proposals in this letter.

2. These one hundred and thirty-seven villages being, as the accompanying map will show, very inconveniently situated for inclusion in one táluka, have since been re-distributed as follows :—

80 remain in the Bankápur Táluka, the Mámlatdár's Kacheri being at Shiggaon.

52 have been transferred to the Karajgi Táluka, which place was formerly the site of a Mahálkari's Kacheri, and has since been made the centre of a new táluka.

4 have been transferred to the Hángal Táluka, by villages of which they were surrounded.

1 has been transferred to the Hubli Táluka.

137 total.

3. These villages have been entirely re-measured on the system described in para. 6 of my letter No. 141 of the 29th January 1874, regarding the Hubli and Nawalgund villages, the main features

of which are the following :—Every separate occupancy already recognized in the Government accounts is made into a separate survey number. Similarly, every separately recognized share of inám land is made into a separate survey field in accordance with the orders contained in Government Resolution No. 4248, dated 24th July 1873; this will entirely save in future the difficulties which have hitherto frequently occurred in the collection of judi from the land being entered in the name of one person and being actually held by another, who was, moreover, frequently responsible in the accounts for his quota of judi on the whole watan, without any subdivision of the land being correspondingly recorded against his name. Survey numbers containing inám and Government land are also divided into separate numbers according to boundaries laid down under the Mámlatdár's orders. All survey fields of excessive area are divided into survey fields of about 20 acres each.

4. In para. 2 of his letter No. 612, of the 27th February last, the Collector objected to the recognition of subdivision of survey fields in the following terms: —" I am of opinion that subdivisions should not be recognized and made into independent survey numbers whenever their area is less than the minimum fixed for this district, under section 17 of Act IV of 1865"; and in para. 3 of his forwarding letter No. 716, of the 9th March last, the Revenue Commissioner concurs with the Collector in this opinion. I think in this matter there is some misapprehension. No subdivisions of survey fields are now recognized and made into separate survey numbers which have not already separate recognition as distinct occupancies in the accounts. It would, it appears to me, be very inadvisable not to take this opportunity of putting every separate occupancy, already having separate recognition by entry in the Government accounts, on the independent basis of a separate revenue survey number, thus freeing the holder from all possibility of any future complication or involvement of his interests with those of the other occupant or occupants in what has hitherto been one survey number. No new occupancies whatever are created, large or small; but every existing occupancy recognized in the Government accounts as such, whether large or small in area, is made an independent survey number. The general result of the breaking up of old survey fields from all the above causes is, that while these one hundred and thirty-seven (137) villages according to the old survey contained 11,685 survey fields, they now comprise 17,396 survey fields.

5. I did not think that it would be feasible to dispense with entire re-measurement. In the first place the boundary marks were put up at the time of the original survey with various degrees of promptitude after the measurement was executed; at that time

Act III. of 1846, under which systematic provision for the erection and preservation of boundary marks was made, did not exist, and a possibility of some errors in locating the marks existed. I do not, however, think that in Dhárwár any very serious extent of error arose from this cause. But a large number of survey fields required to be subdivided into two or more, in pursuance of the measures explained in the preceding paragraphs ; again, a large number abutted on country cart tracks and nálas. The latter are of a very shifting nature as regards their course in the black cotton soil ; and the former, when a large proportion of the country was waste, were not kept, by the interests of the holders of the land on each side, within such well-defined limits as is now the case, and, consequently, a very unnecessary width of land was cut up as the track and excluded from the contiguous survey fields. A considerable number of made roads have been lined out in this táluka, as everywhere else in the country, which required to be laid down on the map, and the area devoted to the road rejected from within the boundary of the survey number through which it passed, which would, in fact, be divided into two numbers, with the new road for a dividing line of boundary. Very many survey fields, again, contained both dry-crop and rice land, much of the latter being watered by tanks. The separation of the several areas of dry and irrigated land in one survey number was not, at the time of the first survey, executed with the accuracy required of recent years. In many parts land, formerly recorded as rice land, has long been disused as such and cultivated as dry-crop land only, and *vice versâ*. The same remarks apply to the bágáit or garden lands, of which there is in the táluka a considerable area of a quality unknown in the Northern Deccan. Thus, the entire re-measurement of all survey fields of a mixed nature—that is, containing both dry and irrigated land—was absolutely necessary. After deducting these survey fields, which, from the causes above stated, it would have been imperatively necessary to re-measure, the residue would have been small : and as regards these, too, a careful inspection of and renovation of all deficiencies in boundary marks would have been necessary and the entry of the marks on the village maps. This was not done under the first survey, and partly in consequence of this the stones, in irrigated land especially, are found to a great extent to have disappeared.

6. It became, in fact, the shortest and most economical course to re-measure entirely and thoroughly, and thus ensure no fields escaping re-measurement, by error or oversight in the first instance, requiring consequently men to be sent back to them to correct and make good deficiencies at considerable loss of time. If this re-measurement was an expensive operation there would be a strong

reason for avoiding it to the utmost possible extent, even at the risk of leaving some imperfections in the work; it has not, however, in the case of this or any of the other tálukas re-measured in Dhárwár, cost more than Re. 0-1-4 per acre all over, and a very small fraction of this would be saved if actual re-measurement was confined to the survey fields above indicated as those in which it was absolutely necessary, and a mere inspection of boundary and boundary marks made of the residue.

7. As regards total area there is no fault to find with the old survey. The total area of the táluka, according to it, is acres 258,988 and the total area by the new survey is acres 259,776—a difference of acres 788, or 0·3 per cent., in round numbers a little less than one-third of an acre in every hundred acres difference between the two surveys, the excess area being on the side of the present survey. A great part of this excess will probably be accounted for by more careful measuring up to the present undisputed limit of occupation on roads, nálas, and rivers. Land has now become so valuable that so far from, as formerly, a cultivator objecting to measurement right up to the unculturable bed of a nála or up to a point reducing a country cart track to its legitimate limits, he has long ago appropriated and cultivated the land as far as ever he could up to a road or nála, and is only too glad to obtain recognition of his right by measurement of the included area in his field.

8. Though the total area of the old and new survey exhibits so close a practical correspondence, a good deal of difference, as might be expected, is found in the areas of individual fields from alterations of the boundaries as originally laid down. I have had returns made out for twenty-five villages taken at haphazard, most of them small villages, and the following is the percentage difference of the area of fields according to the old and new surveys :—

Villages.	Total Numbers by old Survey.	Differences between old and present Survey of Fields.				
		Within 5 per cent.	Over 5 and under 10 per cent.	Over 10 and under 15 per cent.	Over 15 and under 20 per cent.	Over 20 per cent.
25	1,683	1,500	110	30	19	24

The villages taken for the above statement of comparative areas were, for convenience sake, on the whole smaller than the average ;

it was evidently desirable to spread the comparison over as many whole villages as possible, and the result in a sufficient number of small villages would afford a trustworthy clue to the general average result.

9. The re-classification has been conducted in the same mode as was adopted for the tálukas of this Collectorate already revised, namely, all original classification above ten (10) annas had a small but sufficient percentage examined in order to ascertain the standard which took effect in each village, and to indicate the amount of adjustment required to bring all as uniformly as possible to the present standard. All fields with an old classification below 10 annas were re-classed entirely, and also all irrigated lands. The low standard of classification in the superior soils, so generally met with in the old work, was also met with in this táluka generally, but in varying degrees in different villages. In the poorer soils the variations of the former classification were much more marked; in many villages the old classification of comparatively poor red soils, which now range at a little above or below 6th class, was a full class or class and a half high—so high, in fact, that with a maximum 40 per cent. higher than the old maximum, the new assessment will, in very many cases of fields, not exceed and, indeed, in some cases will fall short of the old. I myself examined many fields round the town of Bankápur in which this old high classification prevailed, and of which as a fact there could not be the remotest doubt. Part of this difference between the old and present standard for the poorer soils arose, doubtless, from the old classification having in these villages somewhat overshot the proper standard of the time, and part from the present standard in such soils being designedly placed somewhat lower than the old standard. The accumulated difference arising from the two causes would have sufficed to cause a very moderate increase in the maximum rate over that adopted at the first settlement to press very heavily on these lands, if the original classification had been retained unadjusted. As in the lapse of time and constant accumulation of capital the rent-paying capabilities of the better lands have admittedly enormously increased, a considerable increase of assessment on them is not unexpected, but in the poorer lands extreme caution and a sure ascertainment of the classification base of the assessment is necessary to obviate the uprising of discontent. In revisions it is not entirely the total sum of increase which must be watched over, but the distribution of the assessment, both according to what is just in itself, and also with due consideration of the views of the people as to what is fair and just.

10. As in former revision settlements I had statements prepared showing the former and present classification of every field

that was reclassed. When a portion only of the lands of a village were reclassed in order to ascertain the former standard, after examining and considering the comparative old and new classification I fixed the amount of adjustment to be applied to the old classification, to bring it up to the present standard. In the fields below 10 annas old classification, which were entirely re-classed, whenever an excessive difference was found between the old and present classification, as in former revisions I reduced the present classification by an extent never exceeding one class, an amount certain to cover fully any possible margin of error, a certain extent of which is inseparable from the best classification. For obvious reasons it must be desirable in all cases when the increase on a field is greater than the general range of increase on fields in a village, to prevent that increase being aggravated by a possible amount of instrumental error in the means employed for obtaining the valuation of the field. No man, the assessment of whose field is increased more than the ordinary range of the village, should be able to say that the field in question is assessed higher than others of similar quality in the village. The precaution above described, troublesome as it may be to carry out, is a sure and safe preventive of the occurrence of such a result, than which nothing would be more likely to originate discontent, the extent of the spread of which cannot be foreseen.

11. I am most fully alive to the necessity of curtailing re-measurement and re-classification in revision work within the narrowest possible limits. My guide in this work has been para. 5 of Government Resolution No. 5402, dated 4th November 1870, which directs as follows :—

"Looking to the important interests at stake in this work of revision, and the large annually-recurring increase of revenue that is sure to result from the operation, His Excellency in Council desires that no reasonable expense and labour be spared to ensure the work, both of measurement and classification, being done where necessary in as complete and thorough a manner as circumstances will admit of."

Up to the present time re-measurement to the extent of fully eight to nine-tenths of the whole of the survey fields has been an absolute necessity; exempting the small residue from re-measurement at the time would have ensured a very small saving indeed in the first instance, and possibly have caused additional trouble and expense in the end, by doubts arising involving the necessity of sending men back to re-measure some of these survey fields omitted in the first instance. As regards classification, I have managed in Dhárwár to avoid re-classification of a considerable portion of the old work, and my attention is unremittingly directed to this point so as to avoid re-classification to the utmost extent possible.

12. As will be seen by the accompanying map, the old Bankápur Táluka is much broken up into detached parts, the villages of other tálukas in parts projecting into it; it is also further broken up by the almost entire inclusion of the villages of the Savanúr Jághír. From the extreme western villages Madli and Badamgatti, which are within about four miles of the North Kánara boundary, to the extreme eastern village Wadvi, which is within about six miles of the eastern boundary of the Collectorate—in this part the river Tungabhadra—is a total distance of about forty miles.

13. In so great a distance from east to west there are very great differences of soil and climate. In the western villages red soils of clay slate formation are commonly met with, being similar in character to the red soils in the Hubli Táluka to the northward, the assessment of part of which was revised two years ago. The central part of the táluka generally consists of black soil, with occasional hills and patches of red soil cropping out. In the eastern villages granite, or rather gneiss, crops out. The black soils of this táluka are of remarkably superior quality, and are generally considered to consist of about the best soil of that description in the Dhárwár Collectorate. It is probable that this is due to an admixture of red soil particles which, though not sufficient to change the appearance and character of the soil from "regur" or black cotton soil, are sufficient to temper some of the most objectionable qualities of that kind of soil as met with in the northern part of the Collectorate, notedly a tendency to excessive clayeyness and a consequent indisposition to readily and quickly absorb water. The black soil of this táluka has long been famous as most suitable for the growth of cotton, especially of the New Orleans variety, regarding which, as the staple of this tract of country, I shall have more to say in the sequel.

14. The climate of the old Bankápur Táluka varies exceedingly in different parts. In the extreme westerly detached villages the rainfall, which consists principally of the early rains setting in about the beginning of June, is somewhat heavy for superior dry-crop cultivation, and these may be considered in the main rice and garden villages; the same remarks apply, though in a less degree, to the fringe of westerly villages of the main body of the táluka, which may be considered to be equally rice and dry-crop villages—jowári, the test grain as to whether a village is suitable for dry-crop cultivation, being there grown freely as well as rice in the low-lying lands. The central portion of the táluka, going from west to east, enjoys an excellent and certain rainfall, ordinarily getting a fair proportion of both the early and the latter rains. Dry-crop cultivation flourishes exceedingly in this tract. To the east of these villages, in the next north and south belt of villages, the rainfall,

though probably not much diminished in annual quantity, is somewhat less certain and seasonable, these villages getting more of the heavy latter rains and less of the early rains in June. In the villages situated still further to the east this defect in the rainfall occurs more decidedly. But it is a mere question of comparative advantages, for in no part of the táluka can the rainfall be called absolutely precarious and deficient on the average of seasons.

15. The productions of the táluka comprise nearly, if not quite, every kind of agricultural produce met with in Western India. In the extreme western villages "ragi," *alias* "nachni," the ordinary dry grain of tracts of heavy rainfall, is met with to some extent. Jowári, bájri, wheat, túr, and different kinds of pulses and oil-seeds as well as cotton are abundantly grown in the central and eastern parts, and thrive exceedingly well, especially in the central tract extending from the extreme southerly point, south of the river Warda, through a line passing near the town of Savanúr, up to the extreme northern villages of the táluka. Cotton is the great exportable produce, and in consequence of some peculiarity of soil and dampness of atmosphere proving especially favourable to the growth of New Orleans cotton, that variety has to a great extent supplanted the ordinary indigenous kind. The following is the area found under each kind of cotton in these villages, last year, according to the Mámlatdár's returns :—

New Orleans.	Indigenous.	Total Area under Cotton.
Acres.	Acres.	Acres.
32,360	12,729	45,089

16. Rice is grown especially in the western villages, but some is also found in many of the central villages ; it is sometimes watered by direct rainfall, or by water falling on higher ground in the vicinity and intercepted and led into the rice fields by small water-courses, but much is watered from tanks, of which there are no less than 123 used for irrigation in these villages; few of these are of any great area or retain water up to the hot weather. In eight (8) villages only are good tanks of considerable area, which either retain water throughout the year or to an advanced period in the hot weather, when the water-supply will shortly be replenished by the thunder-storms common in the end of April or in the month of May. Failing water from the tanks, artificial irrigation is supplied from wells, or more commonly from what may be rather called holes in the ground fed by the underground drainage of the tanks. In these gardens, cocoanuts, supári trees, sugarcane and pánvel—the leaf eaten with betel-nut—are abundantly grown; rice is also often grown as a change of crop as a second crop.

17. In this táluka we come, in fact, in proceeding to the south on the first approach above Ghâts, to the system of cultivation of cocoanuts, supári, and other valuable garden products under tanks which prevails so generally throughout Mysore, and is almost, if not quite, unknown in the Deccan.

18. As regards communications, an immense change has taken place in the last thirty years. At the time when the expiring settlement was made there was not a mile of made road in the táluka, or, indeed, within many miles of it; and the greater part of what internal and external traffic there might be was carried by pack bullocks. The natural line of export of produce was to the coast. About 1844-45 a commencement was made in North Kánara to make cart roads from Sirsi to the coast. Honávar was the port to which the first road pointed, but that was soon abandoned, and Kumta selected as the future port, the road leading to it by the Devimani Ghát; but it was not till about 1848 that any through communication by cart road was effected between Hubli and Sirsi, and between 1850 and 1855 a road connecting Bankápur with Sirsi passing near Hángal was made. Between 1860 and 1865 a road was made from Bankápur joining the Hubli and Sirsi road at Mundgod and going on to Yellápur, where it joins the Hubli road to Kumta by the A'rbail Ghát, which road below the ghát bifurcates and also leads to Kárwár. The northern part of the táluka can also cut into the Hubli and Kumta road *viâ* Sirsi at Tadas, and get either to Kumta *viâ* the A'rbail Ghát or to Kárwár over the same ghát by a branch road from Tadas which cuts into the main coast road at a village named Kargod, about 20 miles on the Hubli side of Yellápur. As regards the south of the táluka, a line of communication exists between Háveri and Sirsi *viâ* Samasgi which opens connection with Kumta. The portion from Sirsi to Alur, about two-thirds of the whole distance, has been made for many years back, and the remaining portion up to Haveri has been sanctioned.

19. The táluka is intersected on its western border by the old post road between Dhárwár and Haribar. Some ten years ago a considerable sum was annually expended on this road, as it formed part of the mail cart line between Bombay and Madras; but on the opening of the railway through from Bombay to Madras in the beginning of 1870, this road ceased to be of imperial importance. It was at this time even not completely metalled; and now in the rains where it passes through black soil, which it does for some distance in several parts in this táluka, it is very bad indeed. Communication to the east with Bellary, a railway station and great mart, is afforded by a road from Háveri to Hávanur, Bellary being about 80 miles from the latter place, and a road has been planned,

and partially made in portions, from Savanúr by Lakshmeshvar to Gadag. This is a very important road for the districts at either end of it, being a direct line of communication with the coast for Gadag and the country thereabouts, and as regards the northern part of the Bankápur Táluka, opens a fairly direct communication with the large trading town of Gadag ; and it is the more wanted, as parts of the line between Savanúr and Lakshmeshvar pass over a somewhat stony rugged country, where an excellent and durable road might be made, but in its natural state is only passable by laden carts with some difficulty. Between Mundargi in the Dambal Táluka and Bankápur a track exists passing through the Virpapur Pass in the Kappat Hills ; from Mundargi up to which pass a road has been made, a distance of about five miles. This line is much used by cotton carts in the fine weather. Of other minor lines of road there are several useful for local intercourse within the táluka.

20. Thus, in the place of the entire absence of direct communications with the coast existing thirty years ago, now there is more than one line by good roads to more ports than one ; there is also an open line of communication to the north, south, and east. Whenever produce can meet with the best or most convenient market, the way is open to it.*

21. Of good markets there is no want both in the táluka and in the immediate vicinity. Háveri is a trading town of considerable importance ; second to this come Bankápur, Karajgi, and Hulgur ; there are also several minor markets within the táluka. Outside its borders, but at no great distance, there are Savanúr, Lakshmeshvar, and Dhundshi, all of which are places wherein an external trade is carried on to a considerable extent. Many others might be named of minor importance.

22. Háveri is somewhat remarkable as a great centre of the cardamom trade. This very valuable spice is extensively grown in North Kánara about Sirsi and in the northern and western districts of Mysore. No cardamoms are supposed to acquire their full value till they have been soaked in the water of a certain well at Háveri, to which place the cardamoms are brought from a considerable distance. I have heard this practice spoken of as necessary in cardamom-producing districts of Mysore, more than 100 miles from Háveri. I have never heard that this water, which must be of a mineral or saline nature, has been analysed, and intend to obtain some of it on the earliest trustworthy opportunity and send it to the Chemical Analyser. The discovery of the component parts of the water and the consequent possibility of its

* A small map is appended to this letter showing the position of the inland districts with reference to the ports on the coast.

artificial manufacture becoming feasible, would be anything but a gain to the town of Háveri, but it might prove of considerable importance to the whole cardamom trade.

23. There are no manufactures of any great importance in this táluka. Weavers, both in wool and cotton, are met with in greater or less numbers in many villages. Common coarse cotton cloths and ordinary blankets or kámlis form the bulk of the articles manufactured. Karajgi, Nawé Riti, and Bankápur contain the largest weaving population; each of these places has more than two hundred looms. It is satisfactory to be able to state that the weaving industry has by no means declined. I have obtained returns, from the Mámlatdár, of the number of looms in the twenty-seven villages where most weavers reside, according to the returns of thirty years ago and in the present year, of which the following shows the total result:—

Year.	Houses.	Souls.	Looms.
1845	188	1,047	395
1875	371	2,190	867

24. Further particulars regarding the minor manufactures of the táluka will be found in para. 35 of the appended extract from a report by Captain Godfrey, Deputy Superintendent, the officer under whose supervision the classification was conducted.

25. The following statement, compiled from the statistical returns made up at the time of the classification, aided by the returns of the census of 1872, shows the comparative statistics of thirty years ago and the present or a very recent time:—

	At the time of previous Settlement.	1875.	Increase.	Decrease.	Percentage Increase or Decrease.
Population	67,722	88,869	21,147	...	+31·45
Houses { Flat-roofed and tiled.	10,481	14,908	4,427	...	+42·23
Houses { Thatched	2,854	2,089	...	765	—26·8
Agricultural cattle	21,877	21,624	...	253	—1·15
Cows, buffaloes, and their young.	38,400	34,740	...	3,660	—9·53
Sheep and goats	18,064	12,976	...	6,088	—33·7
Ploughs	No record.	7,708	7,708	...	...
Carts	1,641	4,115	2,474	...	+150
Horses and ponies	912	939	27	...	—2·96
Wells ... { Irrigation	No record.	380	380	...	...
Wells ... { Drinking	...	224	224	...	...
Wells ... { Out of repair	...	140	140	...	...

26.* The population at present amounts to 218 per square mile—a large average rate for a district which is in the main dry-crop plain without any large or manufacturing towns within it. The numbers show a moderate and wholesome rate of increase. I have had the returns under this head carefully checked, and believe that those now shown are fairly correct. In houses there is a marked increase in the better class, the flat-roofed and tiled. Agricultural cattle in the táluka, as in others previously revised, show a small decrease. I am inclined to think that this is only partly due to the getting rid of useless and inferior cattle in consequence of the increased expense of keeping cattle. Here, as everywhere in Dhárwár, the agricultural cattle now to be seen are exceedingly good and are a source of great pride to the owners, while thirty years ago this was very far from being generally the case. Bad cattle eat very nearly as much as good, and the people have, as their means have accumulated, discarded their inferior cattle and purchased those of a superior description, obtained mainly by importation from Mysore and the Bellary districts to the eastward; consequently, while numbers have remained stationary, the cattle power of the country has greatly increased. I believe, however, that the number of agricultural cattle shown as now actually existing is somewhat less than the truth. The returns were made up during the fair season, when a considerable number of the cattle of the district are employed in the carrying trade to the coast and elsewhere and escape return in the villages to which they belong.

27. The reduction in the number of buffaloes, cows, sheep, and goats is due to the same cause, the increased cost of keep and reduction in the area of waste land on which formerly grazing was cheaply obtained. From my own observation in former times I can state that large numbers of beasts were then kept which were utterly useless for any purpose whatever; the owners when asked said, "As they cost nothing, they might as well live and eat as not." Of ploughs we have no former record, and I cannot help somewhat doubting the accuracy of the present return, which gives only one plough to 29½ acres of occupied land. The small number of ploughs may be partly accounted for by the fact that it is not the custom to plough black soil, which predominates in this táluka, annually, or more than once in five, six, or more years. The implement used in black soils instead of the plough is called "kunti," a kind of scarifier which thoroughly loosens the soil and eradicates weeds to the depth of three or four inches. A

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* Statistical Table No. IV shows the detail of the population. The percentage shown as able to read and write is—of males 8·7 against 6·4 thirty years ago. Female education appears to have made little or no progress. Para. 49 of Captain Godfrey's report, appended, alludes specially to the subject of education.

picture of this and other agricultural implements in use in the Southern Marátha Country will be found in the report of Mr. Young, Assistant Superintendent, appended to Captain Wingate's original settlement report on this táluka. It may appear but a rude system of husbandry which uses the plough only once in several years, but in the deep black soils nature does to a great extent what the plough is required to do elsewhere. In the hot weather these soils crack in squares of about two-feet sides and about one and half feet deep, each crack being about two inches wide. The first heavy fall of rain washes the surface soil down into these cracks, exposing a fresh surface ; the annual repetition of this natural process ensures a constantly-recurring change of the surface soil. When the plough is used in black soil it is more for the purpose of eradicating weeds, which are beyond the reach of the kunti, than for bringing up the subsoil.

28. The increase in carts—150 per cent.—is less than I should have expected. The number shown as existing at the time of the former survey is greater than was commonly met with, and I imagine that, similarly with the cattle, a considerable number of carts, absent from being employed in the carrying trade, have been excluded from the present returns. As regards horses, the past and present figures differ little. It is worthy of notice that the number of horses are just double those returned in the wealthy old Nawalgund Táluka, which is of larger area and population. There is no special season for horses being more abundant in Bankápur than in Nawalgund, and the fact of their being so must be taken as one indication of the people being exceptionally well off.

29. Statistical Table No. V, made up in the classing establishment, gives the proportion of agricultural and non-agricultural population. The proportion of the latter class appears to be greater than I should have expected in this district where agriculture is the chief resource of the people, for manufactures there are none of any importance. The returns show the following proportions :—Agricultural 43 per cent., partly agricultural 16 per cent., non-agricultural 41 per cent.

30. The appended return,* which is compiled from data collected during the classification from the records of the Registration Office, rejecting all cases in which the sale included more than the simple land, shows the high value possessed by land in this táluka. For brevity's sake I have excluded from the statement all instances of sale, &c., which occurred prior to 1873 ; otherwise double or treble the number of instances might have been given, but to no different effect than those which are shown. Fifteen to twenty times the survey assessment appears to be an ordinary rate at which land is

* Appendix A.

recorded as changing hands, though higher rates are met with. The difficulty in all these cases of returns of sales in the registration offices is, that we have no certainty that the entire transaction from first to last is before us; that which is registered is frequently only the closing transaction of a long series of borrowing and lending, involving the final transfer of the ownership of the land, and no more than is necessary is registered.

31. The cases of sub-letting for money recorded are very few—four only in fact appear, too small a number on which to base any precise conclusions. The mortgages and leases are much more numerous than the cases of sale or sub-letting. The commonest form of arrangement appears to be the making over a field for a moderate term of years on consideration of the receipt of a sum down, the lessee engaging to pay the Government assessment during the period of his tenure. Sums equivalent to 10 to 15 years' assessment and in some cases much more, even double those proportions, appear to be commonly paid down in this manner for a lease for that number of years. Considering the high interest which money bears in agricultural districts, even on security of land, this is equivalent to a very high rate of annual rent. In former revision settlement reports of the Dhárwár Collectorate much information has been given regarding the high value of land, and the old Bankápur Táluka is most certainly second to none in this respect, being—as it notoriously is, excepting some few villages comprising poor soil—one of the very best, if not the most fertile and prosperous tálukas in the Southern Marátha Country.

32. From information collected at the time of the classification Captain Godfrey, who had charge of that operation, estimates that 75·28 per cent. of the Government survey fields of the táluka are actually cultivated by the occupant solely or in partnership with others, and 18·39 per cent. are sub-let, of which about 14 per cent. are sub-let on money rents and 4 per cent. on rents payable in kind. 2·89 per cent. are arable assessed waste, of which I may note some proportion consists of valuable grass lands not allowed to be taken up for cultivation but annually sold by auction. 3·44 per cent. consists of unarable unassessed waste lands. The Collector has, in his remarks on previous revenue settlement reports, viewed with alarm the proportion of fields which were sub-let in the tálukas reported on, which proportion does not materially differ from that occurring in this táluka, or about 20 per cent. I do not think that there is in this extent of sub-letting any cause for apprehension. Many a person holding land under Government finds himself, from one cause or another, holding more land than he can cultivate himself, and naturally sub-lets it to others. That he can do so at a profit, instead of, as in former times, resigning it absolutely and

leaving Government the loser of the assessment due on the resigned land, appears to me rather a matter of congratulation than otherwise. To assume that there was no sub-letting in former times, and that the extent now sub-let is an indication of the land gradually passing out of the hands of the cultivating classes, appears to be going too far. It is true that in former times there was an abundance of waste land available to the first comer; but the breaking up of old waste is an expensive and laborious process, the full returns for which are not reaped for a year or two. Before the first settlement the most conveniently situated lands would, unless some special obstacle existed in the shape of an excessive assessment, ordinarily be occupied; for a man of small means who could not wait for returns from his labour it would, even in past times, have been more profitable to take a clean field as a sub-tenant in preference to taking up land which had been waste for very many years. Hence I consider that during all past times some proportion of sub-letting must have existed, and that what we now find has by no means all sprung up during the period of the expiring settlement.

33. Regarding the rates at which land is ordinarily sub-let, no information is procurable among the people, who, as usual, are especially reticent on all matters of this nature. We know that in fair land, sub-let for payment in kind, half the gross produce is commonly paid to the owner of the land who pays the Government assessment, but the situation and condition of the land act materially in modification of these terms.

34. Regarding prices in this táluka in past times there is the usual difficulty in obtaining precise and trustworthy information. Appended to this letter is a statement* compiled by Captain Godfrey, Deputy Superintendent, from information obtained from the Karajgi Mámlatdár,† regarding the prices prevailing in the Háveri and Karajgi markets since 1840. I also obtained in 1871 from the Bankápur Mámlatdár, through the Collector, price lists from 1817, and have obtained them from the Mámlatdár annually since. The Mámlatdár states that the figures in this return from 1817 to 1865 are filled in from the statements of the village people. As long back as 1864 I began to collect information regarding past prices, requesting that information regarding them might be furnished from the táluka records if procurable there, or otherwise be obtained, if possible, from sowkárs. The Bankápur Mámlatdár *then*

* Marked B.

† Captain Godfrey states that he obtained similar statements from the Bankápur Mámlatdár; but they appeared so utterly untrustworthy that he declined to make use of them.

reported that the old "nirrik patties" had all been destroyed in the general destruction of useless records about 1858, and that he could obtain no information whatever from private sources. I did succeed at that same time—1864—in obtaining returns regarding past prices from several other tálukas, and now show the averages for Ránebennur and Rattehalli—the Kacheri towns of the Kod Táluka, neither of which can be considered such a good grain country as Bankápur—in juxtaposition with the Mámlatdár's returns for Bankápur, and Captain Godfrey's, now furnished, for Háveri and Karajgi :—

Years.	Bankápur. Sers per Rupee.		Ránebennur. Sers per Rupee.		Rattehalli. Sers per Rupee.		Captain Godfrey's Returns. Sers per Rupee.	
	Jowári.	Wheat.	Jowári.	Wheat.	Jowári.	Wheat.	Jowári.	Wheat.
1840 to 1849 ...	37½	29	77 on 7 years.	...	114 on 7 years.	...	118	45
1850 to 1859 ...	42	28½	78 on 7 years.	...	77¾ ...	...	51	31
1860 to 1869 ...	22½	13	38 on 4 years.	...	33¼ ...	...	26	17

35. After a consideration of the figures of the above statement the figures shown under Bankápur appear worthy of no confidence whatever. How the error arose—whether from some confusion in conversion of old sers, or whether erroneous information has been now given by design, which is not improbable—it is impossible to say ; but any one with any remembrance of the prices prevailing throughout the Dhárwár Collectorate thirty years ago would condemn the figures under Bankápur as fictitious, at a glance.

36. The question, however, still remains unsolved as to what prices really were current in past times. It is not probable that there was any great difference in prices between Dambal and Karajgi and Háveri in 1845. At para. 26 of my report* on the Dambal Táluka, revised last year, the average price of jowári is given for 1843-44 at 99 sers per rupee from a report made by me at the time from information collected on the spot, and wheat is in the same report put at 56½ sers per rupee. Captain Godfrey's return for Karajgi and Háveri put those grains, relatively, in the same year at 125 and 45 sers per rupee—a fifth more in one case and a fifth less in the other. The comparison of a single year is a small base on which to uphold or condemn a return of this kind, but it is not without value ; and I am inclined to attach trust, in the main, to the figures of Captain Godfrey's statement in the earlier years.

* No. 129 of 1st February 1875.

The figures may be out one way or the other as much as 20 or 25 per cent.; prices, in fact, then varied as much, and more than that, at different localities and in the same locality at different times.

37. But I believe that we may safely, and without fear of putting prices too low, take the prices given for Hubli at para. 51 of my report* on the revision of that táluka, for the more distant years, lowering them by 20 per cent. Hubli is the chief and only large town—that is, with a population exceeding 20,000—in the Dhárwár Collectorate, and we may be certain that prices there were a full fifth higher than in the grain-producing districts of the centre of the old Bankápur Táluka, or of the rice districts to the west of it. We get, then, the following results as regards jowári and wheat in comparison with Captain Godfrey's returns for Karajgi and Háveri. The years since 1872 are separately shown according to three separate returns—the Bankápur Mámlatdár's, Captain Godfrey's, and the monthly statements for Hubli published in the *Government Gazette* :—

* No. 151 of 29th January 1847.

Year.	No. 1. Hubli Returns less 20 per cent. Sers per Rupee.			No. 2. Captain Godfrey's Return for Háveri and Karajgi. Sers per Rupee.			Average of No. 1 and No. 2. Sers per Rupee.		
	Jowári.	Wheat.	Rice.	Jowári.	Wheat.	Rice.	Jowári.	Wheat.	Rice.
1844 to 1853 ..	73¾	59	36	99½	39	37¾	86¼	49	37
1854 to 1863 ..	39½	37½	21	31¾	24	21½	35½	30⅝	21
1864 to 1873 ..	26¾	11⅛	12½	34	18½	16½	29½	15	14½
	Bankápur Mámlatdár's Return.						*Government Gazette* Returns for Hubli.		
1872	28	11	11½	26	16	16	20¾	11¾	8
1873	25½	14½	14½	17	12	12	21½	12½	8
1874	37½	12	24½	43	14	21	26¾	19½	11
1875	33	20	29	31	22	22¾	27¾	24½	15½

38. An examination of the above return does not appear to bring us much nearer any definite conclusions if all the figures are to be taken as of equal value. As regards the old returns, those up to 1873, I have struck an average between Captain Godfrey's returns and the Hubli returns, and shown this in the third division of the upper statement; it is, I think, as fair a representation of the average course of former prices as we can get. As regards the prices of the last three or four years, we are confronted by the most astonishing anomalies in the Bankápur returns, whether furnished by the Bankápur Mámlatdár or by Captain Godfrey who obtained his from the Karajgi Mámlatdár and the averages of the returns quoted for Hubli in the *Government Gazette*. Considering

that from Bankápur to Hubli is not more than two days' journey for a cart, and from Karajgi or Háveri not more than three days', and that there is a good road, at any rate during all the fair season, it is an utter impossibility that prices can have varied at the two places nearly cent. per cent. on the average of a year, and that, too, on an article like rice, far less bulky and weighty in proportion to its value than common grains. It is quite possible that at particular times and places prices may have been as low as stated in Bankápur during the last two years, but in the face of gazetted prices at Hubli I believe the Bankápur and Karajgi Mámlatdárs' returns for recent years to be untrustworthy. The gazetted prices at Hubli, of late years, I believe from careful enquiry, to be about correct; and the Bankápur prices cannot, on the general average of the year, have varied from them more than 20 or 30 per cent. or thereabouts.

39. It will, therefore, appear that in the price of jowári the ryot is now about 80 to 100 per cent. better off than on the first decade of the expired settlement; in wheat prices may be better now in about the same ratio; in rice the ratio of increase may be a trifle less. The great difference between past and present times is, that formerly the seller was obliged to take what the buyer would give him, competition was very limited, and any quantity of common grain brought to market induced a ruinous fall in price. An excessive supply will now, of course, affect prices, but not as formerly; if grain is not wanted in one place it is in another, and a seller has always a fair chance of obtaining a remunerative price, which certainly was not the case in former times. It is to records of sales under pressure of glut or scarcity that we owe some of the extraordinary anomalies in the older returns of prices. The above estimates of the difference in the prices of the first decade of the expiring settlement and of those of the present time is unavoidably based, to a great extent, on approximation, but I think if there is any error it is rather on the side of under-estimate of the difference. The second decade shows a great increase in price over the first, but this difference is much increased by the great rise which began to take place in 1861, and, as will be seen by reference to Captain Godfrey's detailed statement,* arrived at its culminating point in 1863, the last year of the second decade.

* Appendix B.

40. But the principal export of the táluka is cotton. Regarding the present and past price of this staple we are in possession of trustworthy information, and are independent of local statistics. Thirty to thirty-five years ago the American variety of cotton had not been introduced into the Dhárwár Collectorate, except to a most trifling extent. The cotton produce of the district consisted then of indigenous cotton known in the Bombay market

as "Kumta." The price of this kind of cotton at that time may be put at Rs. 75 per khándi in Bombay—more frequently below that sum than above it. Now, Dhárwár "sawginned," under which name most of the cotton of Dhárwár is sold, is quoted at about Rs. 160 a khándi. If out of the Rs. 75 per khándi—Bombay price of thirty years back—Rs. 25 went to transit and profits of intermediaries, the ryot only got Rs. 50; if the same sum now goes for transit and intermediaries, and with improved communications and competition it should certainly not have increased, the ryot now gets Rs. 135 per khándi instead of Rs. 50 as in former times. His position is also materially improved by the introduction of the American variety of cotton, which both gives more weight of wool to the acre and of a superior quality. It is, on the whole, not too much to say that the ryot is, on the article cotton at present prices, a full 50 per cent. better off than he was formerly; and a considerable fall must still take place before Dhárwár sawginned is quoted at Rs. 125 a khándi, which would still leave the ryot about 100 per cent. better off than formerly.

41. It is a moderate estimate that each acre of the acres 45,089 under cotton in this táluka gives an average annual produce worth on the spot Rs. 14 per acre; at present prices this will give a total sum of over Rs. 6,30,000, or about three times the whole land revenue of the táluka, as proposed hereafter under the revision, from one-fifth of the total area. Cotton, too, is by no means the only exportable product; all kinds of grain are exported to some extent, and sugar, oil-seeds, pulse, and garden produce, cocoanuts, and supári, are all exported to a considerable extent, and are articles sure of a ready sale at all times.

42. Statement C. of the Appendix gives the past revenue history of the táluka since 1836-37; of this statement the following is an abstract:—

Year.	Government occupied Land.	Government arable assessed unoccupied Land.	Collections on Government Land.	Remissions.	Outstanding Balance at the end of the year.
	Acres.	Acres.	Rs.	Rs.	Rs.
1835 to 1845	156,158	55,269	86,849	14,935	7,107
1846 to 1855	189,690	35,630	86,143	627	4,257
1856 to 1865	221,532	3,664	1,06,943	1	....
1866 to 1874	233,304	1,933	1,08,573	....	....

43. The detailed statement, Appendix C, merits a few remarks. Before the settlement in 1845-46 each year shows large remissions and outstandings at the end of the year, and for the last four years a declining area under occupation and a revenue diminishing at an accelerated pace annually. From what followed this evidently mainly arose from faulty distribution rather than marked excess of the assessment; for, while by the settlement the

demand was reduced but from Rs. 85,671 in 1845-46 to Rs. 78,336 in 1846-47, the waste land, which at the time of the settlement was two-fifths of the whole in area, was rapidly occupied with annually-increasing speed, till in 1856-57 the occupied area had increased more than 50 per cent., and the annual revenue had attained to Rs. 1,02,355, a sum close on Rs. 5,000 more than had ever been realized in the ten years preceding the settlement. In the first ten years under the settlement, remissions and outstandings appear opposite most years, but from that year there have been no remissions whatever, and not a single rupee has ever been outstanding at the end of the year.

44. In 1866-67 the area of unoccupied arable waste appears as acres 1,155 against acres 134,827 occupied. During the five or six years previous, the people appear to have taken up nearly every bit of available land ; some odd survey fields will never be readily taken up by any one, from being intersected with roads and paths, or for some other reason, which renders them an undesirable acquisition to any one valuing his peace and comfort. It appears that almost immediately some of these fields commenced to be resigned and the arable unoccupied waste area, which was acres 1,155 in 1866-67, gradually increased to acres 2,779 in 1874-75 bearing assessment Rs. 1,408. I have analyzed the returns for each of the villages in which there has been any material throwing up of land in the last seven years, and find that, as might be expected, it is generally land of low quality, and that a very few villages furnish the largest proportion of the whole. For instance, in the village of Surangi acres 482 have been thrown up since 1868, or close on one-fifth of the whole area of waste in the táluka. I do not attach any importance to the small resignation of land of late years ; the occupied area is still equal to that of 1860-61. Had it been eligible land we may be sure it would have been appropriated long before 1860. When taken up it was probably for grazing purposes only ; and the occupant, seeing the extreme pressure for land on the decrease with falling prices, preferred to stand the chance of getting what grazing he wanted at the annual auction to agreeing for its permanent occupation.

45. In a great part of the táluka there is no waste land whatever ; in eighty-eight villages there is not a single waste survey field. What waste there is, is generally in the villages to the west, bordering on the jungle, where grazing is abundant, and in the eastern villages, where there is a considerable area of poor hilly land ; grazing land, therefore, does not sell highly in this táluka. The only large piece of land sold for grazing in the western, or thoroughly cultivated, part of the táluka is the old fort of Bankápur which covers an area of acres 119, and sold in the last two years

for an average sum of Rs. 752-8-0. This is exceptionally good grass land, but still the price obtained is a very high one.

46. The following statement shows the small extent to which it has been necessary to resort to special measures in order to get in the revenue :—

Year.	Notices issued in default of timely payment of revenue.	Resort to actual sale.
1872-73	158	3
1873-74	188	.....
1874-75	141	2

47. The condition of the people is exceedingly good, and the land generally well and carefully cultivated, especially in the western and north-western villages. Detailed remarks on this subject will be found in paras. 18, 19, and 54 of Captain Godfrey's report, extracts from which are appended.

48. I now come to the question of the revision of the assessment. We have a táluka which was thirty years ago absolutely without communications by wheeled carriages with the coast, with two-fifths of the land unoccupied waste, yet possessing soil in a great part of exceptional fertility, and in those parts where the fertility of the soil is most marked a climate and rainfall leaving nothing to be desired. Now, we find a rise in prices of the principal exportable articles of over 100 per cent.; ample external communications provided, affording every facility for removal of produce to the not distant coast, which is nearer to the cotton districts of Dhárwár here than in any other part of the Collectorate; and, moreover, since the last settlement this táluka has received the advantage of the introduction of a new and very profitable description of cotton to which the soil and climate of this tract of country has proved especially favourable. It is clear that a considerable increase of assessment is justified.

49. Captain Wingate in the original settlement of this táluka made for dry-crop soils four groups of villages, as follows :—

		Maximum Rate. Rs. a. p.
1*st*.	15 villages situated most to the west ...	... 1 12 0
2*nd*.	55 villages immediately to east of the above	... 1 8 0
3*rd*.	36 villages still farther t the east	... 1 6 0
4*th*.	31 villages still farther to the east	... 1 4 0

50. It will be observed that the most westerly villages have the highest rate assigned to them. Captain Wingate had been barely two years in the Southern Marátha Country when he fixed these rates, and put the relative advantages of his two first classes differently to what he certainly would have done, and in fact did do, a year or two later. The extreme westerly villages, including the detached block in the Hángal Táluka, have certainly a heavier rainfall, and are in every way less suitable for first-class dry-crop cultivation than the villages a little farther to the east.

51. Commencing from the west, I propose to adopt the following maximum dry-crop rates :—

1*st.*—Four (4) villages detached from the rest of the táluka, and situated among the Hángal villages; these villages were assessed at maximum dry-crop rates of Rs. 1-12-0 by Captain Wingate. Considering that they are not well circumstanced for the best dry-crop cultivation, I propose to adopt a maximum dry-crop rate for these of Rs. 1-8-0. I find that the villages in the Hángal Táluka contiguous to these on the east, Captain Wingate put at Rs. 1-3-6 in the settlement of the Hángal Táluka, the year after Bankápur.

2*nd.*—Fifty (50) villages, of which sixteen (16) villages are situated on the western border of the main block of the táluka, and thirty-four (34) are situated to the east, or inland, of the class to be next described. The sixteen villages first alluded to are, in my opinion, somewhat less favourably situated for dry-crop cultivation than the villages immediately to the east of them which form the next or 3rd class, from excess of rain; and the thirty-four I consider to be, on the whole, somewhat less favourably situated as regards rainfall than the villages contiguous to them on the west, forming the next or 3rd class, and also less favourably situated as regards communications. For these fifty villages I propose to take a maximum dry-crop rate of Rs. 2. The eastern thirty-four villages of this group were in Captain Wingate's Rs. 1-6-0 group, and of the western sixteen villages nine (9) villages were in his Rs. 1-12-0, and 7 in his Rs. 1-8-0 groups.

3*rd.*—Fifty-two (52) villages, which after striking off the sixteen western border villages, alluded to in the last class, form the western part of the táluka. These fifty-two villages are, as a whole as regards natural advantages, the best block of villages in the Dhárwár Collectorate, in climate they are inferior to none, and have a soil of notoriously special fertility, arising from some cause inap-

preciable by the classification. For this group I propose to take a maximum dry-crop rate of Rs. 2-4-0. These villages were mostly comprised in Captain Wingate's Rs. 1-8-0 dry-crop group.

4th.—Twenty-five (25) villages situated to the east of the thirty-four (34) eastern villages of class 2. These villages have a somewhat inferior climate to those adjacent of class 2, and are somewhat more remotely situated as regards communications. For these villages I have adopted a maximum dry-crop rate of Rs. 1-10-0; they formed Captain Wingate's Rs. 1-4-0 group, excepting the six villages put now in the next or fifth present class.

5th.—Six (6) villages in the extreme east of the táluka, comprised in three separate patches, surrounded by Jághír country. Both in climate and communications these are the worst off of all; for these I propose a maximum dry-crop rate of Rs. 1-6-0; they formed the worst portion of Captain Wingate's Rs. 1-4-0 group.

52. Of rice land there is a total area of acres 6,680 against 6,160 recorded by the old survey. Of this, acres 3,105 are Government land against 2,655 recorded at the last survey—an increase of acres 450, or 17 per cent. The increase on the inám land is only 3 per cent., which, at any rate, shows that fear of revision had no deterring effect on the making improvements. For this rice land I propose for the whole táluka a maximum of Rs. 8. Regarding the nature of this rice land, and the rate adopted for it, a few remarks will be necessary.

53. Water has a greater effect upon the value of irrigated land than soil. There are in use the Southern Marátha Country Survey, in tank districts, six classes of water, an abstract of the characteristics of which is here given as laid down by Captain Wingate in 1847, when for the first time a systematic classification of water was introduced in the Southern Marátha Country Survey:—

1st.—A perennial supply from tank or stream, admitting of better kinds of sugarcane being grown every second or third year.

2nd.—Supply from same source as above, but not so good, admitting a second-rate crop of sugarcane.

3rd.—Supply of water from same sources as in 1st and 2nd classes, but from land being situated high, or when the water does not run till the end of December or January, and, consequently, in either case sugarcane can only be grown when the rains have been very favourable.

Secondly.—When water is not derived from a tank or stream, but in consequence of the land being in a low situation, sugarcane can be grown when the rains are favourable.

4th.—When there is not a supply of water, or advantages of situation, admitting of sugarcane being grown, but the supply of moisture is sufficient to admit of a rice and an after-grain crop being grown in one season ; or if an after-crop cannot, from some defect in the soil, be grown, yet the moisture suffices to produce an excellent rice crop.

5th.—Supply same as in preceding class, but no after-crop can be raised, and in consequence of the water-supply being drawn from a small tank or from channels led from higher ground, pretty frequent rainfall is required to give one middling rice crop.

6th.—Water-supply derived from pure rainfall.

Intermediate or half classes occur from striking the average of water classification in the several "shares," or portions of a field separately classed, in order to obtain the water-classification average for the whole field or the whole rice land in a field.

54. The two highest classes, and even the third class also, contemplate something better than what might be called mere rice land. In fact, the greater part of the sugarcane grown in the Dhárwár Collectorate is grown in what is ordinarily called rice land, being cultivated with rice followed by an after-crop two years out of three, and in the third year with sugarcane. It is not till we come to the 4th and 5th classes of water that pure rice land in the ordinary acceptation of the term is met with.

55. We have to guard against assessing that rice land extra, and especially as such, which comes under the definition of an improvement. Of course, if an excess of area was found now to be rice land above that recorded at the first survey, the presumption would be that the excess was the result of an improvement ; this would, however, be by no means a certainty, as we know that it was not till a later period in the progress of the Southern Marátha Country Survey that a systematic mode of dealing with the rice land, either in measurement or classification, was adopted ; and though the total area has not very materially increased above that recorded at the first survey, about 8 per cent. only, yet owing to rice land having been in places disused as such, and converted into dry-crop land, the newly-made rice land must be something more than the difference between the old and new total areas. A survey field might show an increase of a fourth in the rice land now in it compared with that recorded formerly ; the water class in each third of the field would certainly differ much—part might

be watered from a tank and part by mere rainfall, would require a long and troublesome investigation, possibly coming to nothing in the end, to ascertain which part was the new rice land and which the old, and to what precise extent the water-supply applied to the new rice land was fairly exempt from taxation.

56. I have endeavoured to meet, and I think effectually, any possibility of touching improvements by adjusting the assessment on all rice land in the following manner :—

Land coming under 6th water class, or pure rainfall, is put at the simple dry-crop rate. Land coming under 5th water class is put at the assessment of dry-crop land of the same quality, fairly well situated as regards accidental flooding ; that is, with 1½ class added to its ordinary dry-soil valuation above the 5th water class only does the assessment commence to differ from that imposed on dry-crop land. Rice land *now* above that class, which was placed at a lower rating in the previous assessment, must owe its increased valuation either to the appropriation of external advantages, or to faulty valuation of advantages existing at the time of the first classification. Improvements of land so as to raise their water-supply above that described as 5th class are, as a general rule, far beyond the scope of private capital ; but should such be shown to have been made, they must, of course, be duly respected. By putting the new assessment of 5th class rice land at that on favourably situated dry-crop land, and that on 6th class rice land at the simple dry-crop rate, whether the rice land in question is old or new, we effectually provide against putting any extra assessment on what may be fairly called untaxable improvements. And, further, to obviate any difficulty on the score of the soil classification having been improved by the conversion of dry-crop land into rice, I have, in all cases where the present area of rice land materially exceeded that formerly recorded, reduced the present soil classification from half a class to a whole class, if it exceeded the old.

As an explanation of the bearing of the combined water and soil classification I give in the margin an extract from the table used for the villages of the táluka under report, for which a maximum dry-crop assessment of Rs. 2 is proposed. This extract shows the bearing of water classification on 16-anna or 1st-class soil and on 12-anna soil, which sufficiently explains the mode of working out the combined assessment, and shows the operation of the water classes. It will be observed that in the upper classes the assessment does not descend in precisely the

Water Classification.	Soil Classification.	
	Annas 16.	Annas 12.
1 ...	8-1	6-12
1-6 ...	7	5-14
2 ...	6	5-0
2-6 ...	5	4-4
3 ...	4-4	3-9
3-6 ...	3-8	2-15
4 ...	3	2-7
4-6 ...	2-10	2-2
5 ...	2-6	1-13
5-6 ...	2-2	1-10
6 ...	2-0	1-8

same ratio as the simple soil valuation, water having more to do with the value for assessment purposes than soil. The difference in the assessment in the higher classes in each step up is considerable; but the difference between the productive power of the first three classes is most marked, they being severally represented by first class sugarcane, middling sugarcane, inferior or uncertain sugarcane.

57. The precise valuation given in the extract of the table above has been modified, specially for the rice lands of this táluka, so far that the rice classes proper, those below the third, are put on what would be a Rs. 6 maximum scale, while above third the differences between each class are increased so as to attain a Rs. 8 maximum scale. The effect is to keep down the assessment on the rice lands and to keep that on the sugarcane lands up. On the lower class rice lands especially it is always desirable to be low, as this is rather a precarious cultivation, though exceedingly profitable in some years. In this táluka there was an additional reason: in examining the old rice land assessments I find they were generally very low indeed. The system of distributing the assessment in these lands then in force is not described by Captain Wingate in his report; it was, in fact, the first rice country of any extent that he had touched, and it was not till afterwards that the plan of defining water classes by precise valuation was framed; moreover, he had formed an estimate of the value of rice cultivation which he saw reason afterwards to somewhat modify. Captain Wingate's proceedings in regard to this kind of cultivation were in this táluka, I believe, to a great extent tentative, and therefore necessarily on a low and safe standard. In this táluka he took Rs. 5 as the highest rate for these rice lands, inclusive of the combined rice and sugarcane lands; while in the Dhárwár Táluka, settled two years after, rates of Rs. 8 for a large part of the táluka were sanctioned, and have not been found to press unduly. And similar and even higher maximum rates still, up to Rs. 12 for lands round Belgaum, were afterwards proposed with Captain Wingate's approval.

58. But, as Captain Wingate's Bankápur rice assessment was decidedly low, some respect is due to expediency in keeping it very fully low now in the pure rice lands, apart from what is called for by the uncertainty of the crops on some of these lands. But the same call does not exist in the case of these lands, which produce sugarcane,* and have excellent water-supply generally coming

* The average price of jágri, the coarse sugar manufactured, has risen much during the past thirty years. The following are recorded by the Bankápur Mámlatdár as the average prices per local sugar maund of about 26 lbs.:—

	Rs.	a.	p.		Rs.	a.	p.
1841-50	0	12	7	1873	1	8	0
1851-60	1	12	0	1874	1	12	0
1861-70	2	8	9	1875	1	8	0

from large tanks. In this táluka, a Rs. 8 maximum rate means Rs. 6 water-rate, and this is, I imagine, a good deal less than the Irrigation Department would consider a modest demand for one year of sugarcane and two years of double crops.

59. After fully considering the matter from every point of view I could see no reason for proposing more than one maximum rate for all the rice land in this táluka; the minimum rate, as above explained, differs and falls with the falling dry-crop rate on proceeding to the east, and in this falling provides fully for lightening the rate on the lower classes of rice in the very little of this land which will be found away from the moister tracts in the west of the táluka. The precariously cropping rice land will be found in the 5th and 6th classes of water, but mostly in the latter, which, whether old or new rice land, bears the simple dry-crop rate of the village, and, therefore, being taxed as dry-crop land, the cultivator has no cause of complaint if he chooses to indulge in speculative agriculture and gets no return at all in one year in three.

60. According to the records of the last survey, the Government occupied rice land amounted to acres 2,655, bearing assessment Rs. 5,720, or on the average Rs. 2-2-6 per acre. According to the present survey and proposed rates the area is acres 3,105, and the assessment Rs. 10,177, or an average of Rs. 3-4-5 per acre. The increase on the average rate is considerable; but bearing in mind that a part of the increase is due to increase in the soil rates, and that a material part of the area is under the irrigation of good tanks, a sufficiently low average rate will remain for the lower description of rice land.

61. I now come to the garden lands. Of this, there was, according to the last survey, a total area of acres 1,458, of which acres 866 were Government land. Now, according to the present survey, there is a total of acres 1,516, of which acres 965 are Government land. Of the total area, acres 400 are motasthal or watered from wells, and acres 1,116 are pátasthal, or watered by channels led from tanks or streams—in this case almost without exception from tanks. As already stated, much of this bágáit is situated under large tanks retaining water all the year round, and produces crops of the highest value, such as cocoanuts, pánvel—the leaf eaten with betelnut—supári, and sugarcane. Remarks at some length on the former deteriorated state of these gardens and of their unequal, and in many cases excessive, assessment will be found in paras. 29 to 35 of Captain Wingate's report on the first settlement of this táluka. Captain Wingate adopted a maximum rate of Rs. 15 per acre, descending downwards according to the

circumstances of each garden. I cannot find that, practically, any assessment in excess of Rs. 14 per acre was actually imposed by him, and in fact only in twelve survey fields in excess of Rs. 12. Many of the gardens were in a very ruinous condition at the time of the first settlement from excessive over-assessment and consequent poverty of the holders—the actual rate per acre in many cases being, before the last settlement, as high as Rs. 40 per acre. It was a matter of absolute necessity to assess such deteriorated gardens lowly, and, consequently, varying rates are found on gardens under the same tank with the same soil and the same supply of water, at present at any rate, and now in equally good condition, having in fact the very same crops growing on them. On the gardens in good condition it even was necessary, thirty years ago, to give large reductions; but for revenue considerations not larger than was absolutely necessary, in order to be able to spare the poorer gardens and enable them to bring their condition up to a fitting correspondence with their respective advantages, which appear now to be fairly turned to account as a general rule.

62. I propose, therefore, to adopt a maximum garden rate of Rs. 12 per acre for the táluka. This will give a reduction in some cases, but not in a very large number, and will enable all gardens to be put under one fairly uniform footing according to the supply of water available in each case. This reduction of maximum rate will not involve any loss of revenue, as many cases of good gardens not paying any water-rate have been discovered in the present survey, they being entered as dry-crop in the papers of the last survey and so assessed, and have paid nothing beyond dry-crop assessment to this day, though for years back they must have been cultivated as bágáit and have been drawing water from a Government tank. The following statement shows the area and assessment of the Government pátasthal bágáit according to the old records and according to those of the present survey:—

	Acres.	Assessment.	Average Rate per Acre.		
		Rs.	Rs.	a.	p.
By old survey records of 1874-75 ...	624	4,980	7	15	8
By new survey	732	6,919	9	7	3

The difference in area does not represent the new bágáit land fully, as a good deal of the land recorded as bágáit at the last

survey is now found to be disused as such and used as dry-crop land.

63. It appears to me that some cases will be found of inám dry-crop lands having been made into garden with water from a Government tank without payment. In such cases the full amount due to water will require to be imposed on the inámdárs.

64. As regards well garden the usual treatment was adopted in accordance with Government Resolution No. 1028, dated 25th February 1874, the well bágáit recorded at the last settlement being assessed within the highest rate on dry-crop land, and the area since converted into bágáit at simple dry-crop rate. In a few cases of well garden land, the well watering which was situated immediately below a tank and clearly drew its supply of water from it, a rate not in excess of double the ordinary dry-crop rate was imposed.

65. The following statement shows the general result of the imposition of the above proposed rates of assessment on each group or class of villages and on the whole táluka :—

Class.	Number of Villages in each Class.	Maximum Dry-crop Rate.	By Former Survey.		By Revision Survey.						Increase of Assessment per cent.
			Government occupied land.		Government occupied land.		Government unoccupied assessed waste.		Total.		
			Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	
		Rs. a.		Rs.		Rs.		Rs.		Rs.	
1st	4	1 8	3,142	3,437	3,476	4,951	245	398	3,721	5,349	44·1
2nd	50	2 0	48,164	36,291	50,200	54,478	2,732	1,250	52,992	55,728	50·1
3rd	52	2 4	44,019	47,976	44,975	74,991	528	302	45,503	75,293	56·3
4th	25	1 10	30,365	16,293	31,441	22,134	2,747	687	34,188	22,821	35·8
5th	6	1 6	7,081	3,954	7,181	4,848	4	1	7,185	4,849	22·6
Total ...	137	...	132,771	1,07,951	137,333	1,61,402	6,256	2,638	143,589	1,64,040	49·5
6th[1] Byáhatti, a detached village in Hubli ...	1	2 0	10,090	9,777	10,151	16,189	4	4	10,155	16,193	65·6
Grand Total...	138	...	142,861	1,17,728	147,484	1,77,591	6,260	2,642	153,744	1,80,233	...

[1] Byáhatti will be found separately reported on in paras. 76 and 77.

66. The total increase in Bankápur is estimated at 49·5 per cent., a little less than in the Hubli, Nawalgund, and Dambal tálukas settled in the two preceding years. This estimate is at

present only approximate, as the detailed papers are only in process of being made up ; but I do not believe it will vary one 1 per cent. either way from that amount. Considering the great advantages of this táluka and the lowness of the old assessment, the increase can only, I believe, be viewed as most moderate. The town of Savanúr was with the other villages of that State settled five years ago, and a maximum rate of Rs. 4 for the town itself considerably reduced the former assessment, and is working satisfactorily, I am informed. The contiguous and, indeed, intermixed villages of the Kundgol Táluka of the Jamkhandi Jághír were settled three years ago, and in those maximum rates from Rs. 3-12-0 to Rs. 3-8-0 were introduced.

67. It will be observed that the largest increase—56·3 per cent.—is in the 3rd class, the best block of villages in the táluka, and I am inclined to think in the Southern Marátha Country. This group of villages comprises within its line of boundary the jághír town of Savanúr above alluded to, and is equivalent in position to the best of the Kundgol Jághír villages above. In the case of both Savanúr and Kundgol we were obliged, as far as we consistently could, to make up a certain revenue. The people in jághír states are accustomed to much heavier payments than they are called on to make in Government territory, and heavier survey rates can be imposed without their repining, and must be imposed in order to afford that amount of the revenue without which the Chief will not give his consent to the settlement. But if the jághír village can pay Rs. 4 to Rs. 3-12-0 per acre, the people of the adjacent Government villages can pay Rs. 2-4-0 on the same quality of land, and, moreover, I have no doubt whatever that they will pay it without any sign of discontent. The villages of the 2nd class are just inferior to those of the 3rd class ; their increase is just a trifle less, namely, Rs. 50·1 per cent.

68. Next in order of increase come the four villages of the 1st class. Captain Wingate's dry-crop maximum rate of Rs. 1-12-0 is here reduced to Rs. 1-8-0 ; but, notwithstanding, an increase of 44·1 per cent. appears from increase on the rice and garden land and from a considerable area of very valuable garden land coming for the first time under assessment.

69. In the 4th and 5th classes the increase descends in the regular gradation of these classes, being less and less favoured in situation and other advantages.

70. There are no cases of very excessive percentages of increase on whole villages ; there are three villages only showing increases in excess of 80 per cent. These as well as half the

villages having increases between 70 and 80 per cent. are villages of the 3rd or Rs. 2-4-0 maximum class—villages of the very highest advantages, and for which expediency, and not inability to pay, induced me to refrain from proposing a somewhat higher maximum. In most of the other cases of the large increases it will be found that there is some increase in the area of rice or garden land ; a very few acres of the latter of the higher quality would throw up the percentage increase in the case of a small village most materially. In two villages of the 1st class, Nos. 1 and 4 of the general list*—Belwatti and Badamgatti—the increase is large in the rice land. I see nothing in the papers to lead me to doubt its correctness, but shall have some further examination made of the water classification before confirming it finally.

*Appendix D.

71. The following statement shows the total area and assessment of the táluka under every head :—

Tenure of Land.	By former Survey.		By Revision Survey.		Collection of Judi on Ináms.
	Acres.	Assessment.	Acres.	Assessment.	
		Rs.		Rs.	Rs.
Government occupied land	132,771	1,07,951	137,333	1,61,402	...
Do. unoccupied arable waste.	2,779	1,408	6,256	2,638	...
Ináms	89,410	86,740	90,295	1,26,851	49,114
Government unarable unassessed waste	34,028	.....	25,892	.....	...
Total ...	258,988	1,96,099	259,776	2,90,891	49,114

The total increase in area by the present survey acres 788, as explained in a preceding para., is to be accounted for by more careful measuring up. The increase in the area of Government land, both occupied and waste, will be accounted for by the diminution under the head of unarable ; this is not due, to any great extent, to the transfer from the unarable to the arable head of large areas included in survey fields by the last survey under the first head, but to the accumulation of small differences and to new arable survey fields being made, comprising the better portions of large fields formerly entered as unarable.

72. Over the whole Government occupied land of every kind the existing assessment shows an average of Re. 0-12-7 ; and under the proposed rates Rs. 1-2-10 appears as the average rate, an increase of Re. 0-6-3 per acre.

73. I have now finished my proposals for the revision of the assessment of this táluka. The increase in revenue might easily have been made somewhat higher by increasing the rate on the

central and north-western part of the táluka, but in consequence of the low former assessment of many of the best villages a good number of cases of heavy increases would have occurred. This it appeared to me expedient to avoid. We might, and, I doubt not, with equal ease, have got another 5 per cent. of revenue; but the proposed rates give a very handsome increase, and with it, in my opinion, we may be fairly content.

74. As at the time of the past settlement, the great resource of this táluka is the production of cotton. At the time of the first settlement cotton of the ordinary indigenous kind was the only kind known, except possibly in the case of a few experimental fields. Since, a superior kind has been introduced—the New Orleans variety—and in this tract thrives better than anywhere else in the Southern Marátha Country or indeed in any other part of India. But the wool of this kind cannot be cleaned from the seed except by means of a gin or some such machinery. The cotton was introduced by Government, who for a series of years took measures which were reasonably effective in keeping the gins in good working order—in such order, at any rate, as not seriously to damage the fibre of the cotton. Of recent years, from one cause or another, the gins have fallen into a very bad condition, indeed, and the staple of the cotton is becoming annually worse and worse. The total number of the saw-gins in the old táluka are 320, valued at Rs. 66,374; these gins are the private property of cultivators and cotton dealers. But it is not probable that 5 per cent. of them are in such order as not seriously to damage and depreciate the fibre of the cotton passed through them. Legislative interference has been proposed placing all cotton machinery under duly authorized inspection, with power to close any which was found in an inefficient or destructive state. On different reasons this proposal has met with little favour from the general mercantile community in Bombay or from Government, though the European merchants on the spot and some in Bombay also deem some such measure the only present practicable remedy. The subject is a very large one which can hardly be fully discussed here, but perhaps enough has been said to show the necessity of some attention being paid to the subject, and some regular enquiry held; for a most important article of export as well as one capable of supplying many special wants in the Bombay mills, runs a fair chance of being driven out of the market before the natural remedy can intervene to save it. As soon as railway communication is available with the Dhárwár Districts, European cotton-cleaning factories under proper supervision will spring up and do all that is necessary in providing proper machinery, but some years may elapse before that fortunate time arrives.

75. On the subject of improvements in communications I have but a few remarks to make. The chief objects calling for immediate attention and a concentration of resources on them seem to me to be :—

1*st*.—The improvement of the main Dhárwár and Haribar road so as to render it fully passable by carts, even after heavy rains.

2*ndly*.—The completion and making passable, in all weather, the line from Bankápur to Gadag *viâ* Savanúr, Lakshmeshvar, and Mulgund.

3*rdly*.—The construction of the line from Savanúr to Mundargi by the Virpapur Pass.

76. I have now to allude to the revision of the assessment of the village, or rather town, of Byahatti belonging to the Hubli Táluka—for it has a population of 3,880 souls—which falls in this year. This village is shown on the map as situated where the high road from Hubli to Nargund and Sholápur crosses that from Bellary and Gadag to Dhárwár ; it is within ten miles of Hubli, and within fourteen of Dhárwár. This village is so situated as to have a good and certain rainfall, and with small exception consists of one great sheet of black soil. It belonged to the Soni Chief, and lapsed to Government on his death without heirs in about 1844-45. It was surveyed at once, and settled in the following year. Byahatti is now one of the finest and most prosperous villages in the Dhárwár Collectorate, which was far from being the case at the time of its lapse to Government. It is bounded on the south and west by two villages already revised in the Hubli Táluka two years ago—Kusugal and Sul, and I propose for it the same maximum dry-crop rate as was applied to those villages, with which it is in circumstances precisely identical, namely, Rs. 2, sanction to which is also requested.

77. Byahatti* contains by present survey a total area of 16,186 acres, and a total assessment, according to the old survey, of Rs. 14,942, of which Rs. 9,777 was on Government land. According to the proposed rates the total assessment will be Rs. 24,954, of which Rs. 16,189 will be on Government land—an increase of 65·6 per cent., which is a trifle less than the increase falling on the adjacent villages of the same character settled two years ago.

* Supplementary statistical information in connection with the village of Byahatti contained in Tables Nos. 3, 4, 5 and 6 collected at the time of revision survey and a comparative revenue statement showing the revenue realized since the introduction of the original and the revision survey settlement is annexed after each respective statement for the main body of villages under the revision settlement.

78. The revision of assessment of the whole of the country above alluded to will, I estimate, cost the sum of Rs. 38,800, and will secure an additional annual revenue of Rs. 59,863 ; and, if I may judge from the experience of the past two years' revision settlements in Dhárwár, this additional revenue will be paid without the slightest difficulty or discontent.

79. It now only remains to ask for the sanction of Government to the settlement above proposed for thirty years.

80. Appended to this letter are the usual statistical returns and copy of the original settlement report made by Captain Wingate.

81. I also append extracts from a report by Captain Godfrey, the officer who conducted the classification.

Your obedient servant,

W. C. ANDERSON,

Survey and Settlement Commissioner, S. D.

Forwarded through the Collector of Dhárwár and the Revenue Commissioner, S. D.

STATISTICAL TABLE No. III.

Details of Cultivation in A. D. 1875.

District.	Surveyed Villages.	Crops.	Percentage of Total Cultivation of Government and Inám Lands.		
			Total.	Kharif.	Rabi.
1	2	3	4	5	6
Old Bankápur Táluka of Dhárwár Collectorate.	Khálsat villages. 137	Jowári (early kind)	33·85	33·85	...
		Do. (late kind)	0·37	...	0·37
		Túr	3·06	3·06	...
		Múg	2·81	2·81	...
		Matki	0·15	0·15	...
		Rála	1·57	1·57	...
		Kulthi	2·07	2·07	...
		Castor-oil	3·11	3·11	...
		Til	0·50	0·50	...
		Rice	1·87	1·87	...
		Cotton	21·84	...	21·84
		Wheat	1·35	...	1·35
		Gram	0·47	...	0·47
		Kusumba (safflower)	0·08	...	0·08
		Miscellaneous	10·65	10·46	0·19
		Waste or fallow	16·25	...	16·25
		Total ...	100	59·45	40·55

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATISTICAL TABLE No. III.

Details of Cultivation in A.D. 1875.

District.	Surveyed Villages.	Crops.	Percentage of Total Cultivation of Government and Inám Lands.		
			Total.	Kharíf.	Rabi
1	2	3	4	5	6
Hubli Táluka of the Dhárwár District.	Khálsat village Byahatti.	Jowári (early kind)	19·81	19·81	...
		Do. (late kind	7·32	...	7·32
		Tur	2·48	2·48	...
		Mug	2·50	2·50	...
		Rála	2·15	2·15	...
		American Cotton	17·57	...	17·57
		Country cotton	12·24	...	12·24
		Wheat	23·03	...	23·03
		Gram	4·78	...	4·78
		Linseed	0·90	...	0·90
		Kusumba	3·87	...	3·87
		Minor crops	2·17	2·10	0·07
		Yearly waste or fallow...	1·18	...	1·18
		Total ...	100·00	29·04	70·96

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATISTICAL TABLE No. IV.

Detail of Population in A.D. 1875

Táluka.	Caste.	Males. Under 15 years of age.	Males. Above 15 years of age.	Total Males.	Females. Under 15 years of age.	Females. Above 15 years of age.	Total Females.	Total of Columns 5 and 8.	Can read. Males. No.	Can read. Males. Per Cent.	Can read. Females. No.	Can read. Females. Per Cent.
1	2	3	4	5	6	7	8	9	10	11	12	13
133 villages of the old Bankápur Táluka of Dhárwár Collectorate.	Christians	..	..	..	..	..	..	..	..	..	..	..
	Jews	..	..	..	..	..	..	..	..	..	..	..
	Jains	80 96	152 141	232 237	62 70	160 161	222 231	454 468	26 26	11·21 10·97	.. ..	.. ..
	Lingáyats	7,789 5,685	10,891 8,436	18,680 14,071	5,098 4,465	11,827 9,032	16,925 13,497	35,605 27,568	1,986 1,174	10·6 8·34	.. 2	.. ·015
	Mussalmáns	3,035 2,026	3,438 2,424	6,473 4,450	2,315 1,443	3,446 2,598	5,761 4,041	12,234 8,491	202 191	3·12 4·3	.. ..	.. ..
	Hindus. Bráhmans	692 586	1,009 996	1,701 1,582	436 411	1,097 1,107	1,533 1,518	3,234 3,080	1,229 1,154	72·25 73·89	.. 1	.. ·07
	Hindus. Low-castes	8,071 5,740	10,308 7,910	18,379 13,650	5,738 4,769	11,463 8,354	17,201 13,123	35,580 26,773	511 276	2·78 2·023	17 2	·098 ·015
	Total for 129 villages ..	19,667 14,063	25,798 19,907	45,465 43,970	13,649 11,158	27,993 21,252	41,642 32,410	87,107 66,380	3,954 2,821	8·7 6·4	17 5	·004 ·001
	Total for 4 villages of which no old detail of Castes exists ..							1,762 1,342				
	Total population of 133 inhabited and 4 uninhabited villages ..							88,869 67,722				

NOTE.—The lower line of figures are those of the previous settlement.

W. C. ANDERSON,
Survey and Settlement Commissioner, S.D.

STATISTICAL TABLE No. IV.

Detail of Population in A. D. 1875.

Táluka.	Caste.	Males. Under 15 years of age.	Males. Above 15 years of age.	Total Males.	Females. Under 15 years of age.	Females. Above 15 years of age.	Total Females.	Total of Columns 5 and 8.	Can read. Males. No.	Males. Per Cent.	Females. No.	Females. Per Cent.
1	2	3	4	5	6	7	8	9	10	11	12	13
Village Byahatti, Táluka Hubli in the Dhárwár District.	Christians	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..
	Jews	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..
	Jains	13	28	41	6	32	38	79	..	..	..	..
		18	23	41	10	36	46	87	..	..	..	..
	Lingáyats	414	608	1,022	248	690	938	1,960	21	2·05	..	..
		315	454	769	266	481	747	1,516	..	..	..	..
	Mussalmáns	97	145	242	76	156	232	474	..	..	..	..
		72	96	168	44	103	147	315	..	..	..	..
	Hindus. Bráhmans	8	22	30	9	12	21	51	23	76·67	..	..
		6	34	40	6	23	29	69	..	..	..	..
	Hindus. Low-castes	271	410	681	167	468	635	1,316	..	..	..	..
		218	314	532	152	327	479	1,011	..	..	..	..
	Others	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..
	Total New Population ..	803	1,213	2,016	506	1,358	1,864	3,880	44	2·18	..	..
	Total Old Population ..	629	921	1,550	478	970	1,448	2,998	..	..	..	..

NOTE.—The lower line of figures are those for the previous settlement.

W. C. ANDERSON,
Survey and Settlement Commissioner, S.D.

STATISTICAL TABLE No. V.

Occupations of the People in A.D. 1875.

District.	Surveyed Villages.	Occupations.	Number.	Per Cent.
1	2	3	4	5
Old Bankápur Táluka of Dhárwár Collectorate	Khalsat, 137 villages ...	Agricultural	38,216	43
		Partly agricultural	14,226	16
		Non-agricultural	36,427	41
		Total ...	88,869	100

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATISTICAL TABLE No. V.

Occupations of the People in A.D. 1875.

District.	Surveyed Villages.	Occupations.	Number.	Per Cent.
1	2	3	4	5
Village Byáhatti of the Hubli Táluka.	Khálsat	Agricultural	1,826	47·1
		Partly agricultural	19	0·5
		Non-agricultural	2,035	52·4
		Total ...	3,880	100

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATISTICAL TABLE No. VI.

Return of Houses, Chauries, Wells, &c., and of Live and Dead Stock in A. D. 1875.

District.	Surveyed Villages.	Houses.					Wells.				Carts and Ploughs.		Live Stock.													
		Chauries.	Tiled.	Flat-roofed.	Thatched.	Total.	For irrigation.	Drinking.	Out of repair.	Total.	Carts.	Ploughs.	Horses and Ponies.			Female Buffaloes.			Cows.			Carts and Ploughs, Oxen and Buffaloes.	Sheep, old and young.	Goats, old and young.	Donkeys, old and young.	Mules.	Camels.
													Old.	Young.	Total.	Old.	Young.	Total.	Old.	Young.	Total.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Old Barkaipur Talúka.	Government ..	23	1,582	13,353	2,089	16,997	330	224	140	744	4,115	7,708	736	209	939	8,957	7,293	16,250	8,727	9,763	18,490	21,624	7,277	5,699	512	..	..
	183 Villages ..	4	1,179	9,298	2,854	13,335	No record.			446	1,641	No recor.	772	140	912	8,001	7,532	15,534	9,373	13,493	22,866	21,877	18,050	5	592	..	..
	Villages are uninhabited.																										

NOTE.—The lower line of figures are those of the previous settlement.

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATISTICAL TABLE No. VI.

Return of Houses, Chauries, Wells, &c., and of Live and Dead Stock in A.D. 1875.

District.	Surveyed Villages.	Houses.					Wells.				Carts and Ploughs.		Live Stock.													
		Chauries.	Tiled.	Flat-roofed.	Thatched.	Total.	For irrigation.	Drinking.	Out of repair.	Total.	Carts.	Ploughs.	Horses and Ponies.			Female Buffaloes.			Cows.			Carts and Ploughs, Oxen & Buffaloes.	Sheep, old and young.	Goats, old and young.	Donkeys, old and young.	Mules.	Camels.
													Old.	Young.	Total.	Old.	Young.	Total.	Old.	Young.	Total.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Hubli Táluka in the Dhárwár District.	Government village Byahatti.	3	..	893	..	896	7	2	2	11	155	356	13	1	14	251	189	440	196	182	378	823	1	294	24	..	..
		1	..	627	4	632	3	6	1	10	41	351	19	..	19	194	158	352	173	327	500	594	..	975	40	..	..

NOTE.—There is no record of wells and ploughs in the old Khánesumári Patrak. That information is obtained from the record kept by Village Officers. The lower line of figures is that of the previous settlement.

W. C. ANDERSON,
Survey and Settlement Commissioner, S.D.

Average Rate at which Grain and other Products were sold in the Bázárs of the old Bankápur Táluka, from February to May 1875.

No. 1.

Statement showing articles sold by measure.

Number.	Bázár Villages.	Sers per Rupee (each ser capable of containing 80 Rupees' weight of water).																		
		Jowári.	Wheat.	Gram.	Rice.	Tur.	Math.	Mug.	Urid.	Kulthi.	Alsandi.	Rála.	Bájri.	Kusumba.	Salt.	Til.	Náchna.	Linseed.	Powta.	Castor-oil Seed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Karajgi	31	22	16	20	32	16	29	16	36	20	39	...	40	15	16	32	...	21	24
2	Haveri	31	21	16	29	31	26	26	17	36	24	36	25	...	15	15	35	...	25	23
3	Shiggaon	32	22	17	24	40	36	37	18	24	24	60	36	36	16	...	40	...	24	21
4	Hulgúr	31	22	20	21	36	38	39	20	37	26	40	48	40	18	22	43	20	35	23
5	Bankápur	31	23	16½	20	33	16	30	17	38	20	39	30	40	15	17	33	...	20	25

No. 2.

Statement showing articles sold by weight measures.

Number.	Bázár Villages.	Weight measure one ser equal to 20 Rupees' weight—Sers per Rupee.																		
		Jágri.	Sugar, Mugdumi.	Sugar, White.	Chillies.	Tamarinds.	Garlic.	Turmeric.	Coriander (Dhané).	(Khobra) Cocoanut.	(Jíra) Cumin-seed.	Pepper.	Cloves.	Ginger.	Ghee.	Cocoanut oil.	Sweet oil.	Mustard seed.	Betelnut.	Assafœtida.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Karajgi	32	28	13	21	96	23	15	24	14	9	6	1¼	6	7	11	16	29	9	0¾
2	Háveri	32	26	13	20	89	29	15	24	15	10	7	2	7	5	11	15	25	11	1
3	Shiggaon	32	24	12	22	98	16	16	24	16	8	6	1	8	7	10	15	24	12	...
4	Hulgúr	39	25	14	25	100	25	14	32	16	12	7	1¼	8	7	12	16	32	16	1½
5	Bankápur	32	28	13	21	98	24	15	24	14	8	6	1¼	6	7	10	16	29	8	0¾

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

APPENDIX A.

Statement showing Sales, Sub-lettings, Mortgages and Leases in the Villages of the old Bankápur Táluka of Dhárwár Collectorate.

Villages.	Survey Number.	Land, Inám or Government.	Acres.	Survey Assessment.	Amount realized.	Date of transaction.	Agreement entered into.	Information where obtained.
			A. g.	Rs. a. p.	Rs. a. p.			
Chakapúr	40	Government.	20 4	23 0 0	200 0 0	1873.	Sold.	Sub-Registrar's Office.
Nirlgi	22	Do.	24 3	27 0 0	96 0 0	,,	Sold.	
Kyalkond	75	Do.	21 25	22 0 0	92 0 0	,,	Sold.	
Karajgi...	174	Do.	24 39	16 0 0	200 0 0	,,	Sold.	
Do.	176	Inám.	27 24	23 0 0	400 0 0	,,	Sold.	
Kolúr	99	Government.	35 6	39 0 0	700 0 0	,,	Sold.	
Kalsúr	50	Do.	22 19	25 0 0	700 0 0	,,	Sold.	
Ganjúr	11	Do.	19 23	13 0 0	150 0 0	,,	Sold.	
Jellapúr	37	Inám.	15 10	13 0 0	200 0 0	,,	Sold.	
Surangi...	239	Government.	13 27	14 0 0	120 0 0	,,	Sold by auction by decree of Court.	
Do.	213	Do.	25 36	26 0 0	564 0 0	,,	Ditto ditto.	
Do.	246	Inám.	29 18	31 0 0	500 0 0	,,	Sold.	
Do.	215	Government.	28 27	29 0 0				
Ankadkhan	72	Inám.	8 18	8 0 0	300 0 0	,,	Sub-let at Rs. 7 per annum, besides which Rs. 300 are received in advance as a nazrána, land to be in possession of cultivator perpetually. Government judi to be paid by cultivator.	
Konchigeri	116	Government.	25 4	14 0 0	32 0 0	,,	Sub-let at Rs. 32 per annum for 5 years. Government assessment to be paid by owner of land.	
Do.	117	Do.	5 12	3 8 0	13 0 0	,,	Sub-let at Rs. 13 per annum for 10 years. Government assessment to be paid by owner of land.	
Kúrbarmallúr	78	Government.	16 38	20 0 0	200 0 0	1874.	Sold.	
Húvinsigli	30	Do.	26 5	23 0 0	400 0 0	,,	Sold.	
Kúnemelihali	14	.....	29 15	35 0 0	400 0 0	,,	Sold.	
Do.	58	.....	26 29	30 0 0				
Chaudal	16	Government.	25 7	30 0 0	400 0 0	,,	Sold.	
Mugli	34	Do.	36 16	14 0 0	200 0 0	,,	Sold.	
Kalkoti...	60	Inám.	21 5	21 0 0	100 0 0	,,	Sold.	
Kadkol	107	Government.	7 28	7 12 0	20 0 0	,,	Sold.	
Devagiri	76	Do.	26 13	30 0 0	198 0 0	,,	Sold.	

APPENDIX A—*continued.*

Villages.	Survey Number.	Land, Inám or Government.	Acres.	Survey Assessment.	Amount realized.	Date of transaction.	Agreement entered into.	Information where obtained.
			A. g.	Rs. a. p.	Rs. a. p.			
Hatimatúr	262	Government.	38 0	7 0 0				
Do.	264	Do.	27 30	3 8 0	300 0 0	1874.	Sold.	
Do.	265	Do.	34 0	6 0 0				
Do.	269	Do.	38 0	7 0 0				
Chennúr	10	Inám.	16 14	14 0 0	60 0 0	,,	Sub-let at Rs. 60 per annum for 12 years. Government assessment to be paid by cultivator.	
Do.	37	Do.	12 24	9 0 0				
Karajgi	44	Government.	35 26	31 0 0	300 0 0	1875.	Sold.	
Hatimatúr	150	Do.	4 2	9 0 0	270 0 0	,,	Sold.	
Bijúr	6	Do.	21 30	12 0 0				
Do.	7	Do.	23 0	14 0 0	400 0 0	,,	Sold.	
Do.	24	Do.	22 24	15 0 0				
Hiremúgdúr	5	Inám.	11 28	12 0 0	361 0 0	,,	Sold.	
MORTGAGES AND LEASES.								
Shadambi	58	Inám.	18 17	34 0 0	100 0 0	1873.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by lender.	
Kotigeri	56	Do.	29 2	38 0 0	1,600 0 0	,,	Ditto.	
Do.	7	Do.	4 36	3 0 0				
Múnvali	29	Government.	20 10	23 0 0	306 0 0	,,	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by owner of land.	
Gourapúr	1	Do.	8 21	2 0 0	50 0 0	,,	Leased for 8 years for Rs. 50. Land free on expiration of term. Government assessment to be paid by lender.	
Chikmúgdúr	4	Inám.	8 22	10 0 0	100 0 0	,,	Leased for 11 years for Rs. 100; land free on expiration of term. Government assessment to be paid by lender.	
Dévagiri	23	Do.	32 29	39 0 0	300 0 0	,,	Leased for 5 years for Rs. 300; land free on expiration of term. Government assessment to be paid by lender.	

Bijur	11	Government.	28	11	12	0	0	150	0	0	,,	Leased for 5 years for Rs. 150; land free on expiration of term. Government assessment to be paid by lender.
Melmari	11	Inám.	29	7	27	0	0	500	0	0	,,	Leased for 12 years for Rs. 500; land free on expiration of term. Government assessment to be paid by lender.
Do.	1	Do.	30	0	30	0	0	400	0	0	,,	Leased for 12 years for Rs. 400; land free on expiration of term. Government assessment to be paid by lender.
Do.	4	Do.	31	23	30	0	0	300	0	0	,,	Leased for 12 years for Rs. 300; land free on expiration of term. Government assessment to be paid by lender.
Yelgach	14	Do.	14	24	13	0	0	48	0	0	,,	Leased for 16 years for Rs. 48; land free on expiration of term. Government assessment to be paid by lender.
Wádvi	60	Do.	29	37	26	0	0	700	0	0	,,	Leased for 14 years for Rs. 700; land free on expiration of term. Government assessment to paid by lender.
Háveri	164	Do.	25	12	30	0	0					
Do.	165	Do.	52	14	69	0	0					
Do.	166	Do.	30	35	37	0	0	1,000	0	0	,,	Leased for 12 years for Rs. 1,000; land free on expiration of term. Government assessment to be paid by lender.
Do.	167	Do.	41	3	54	0	0					
Do.	40	Do.	3	29	48	0	0					
Hirémúgdúr	79	Do.	20	0	22	0	0	200	0	0	,,	Leased for 5 years for Rs. 200; land free on expiration of term. Government assessment to be paid by lender.
Navá Riti	45	Do.	18	37	13	0	0	400	0	0	,,	Leased for 15 years for Rs. 400; land free on expiration of term. Government assessment to be paid by lender.
Mantrávádi	13	Do.	8	0	9	0	0	50	0	0	,,	Leased for 5 years for Rs. 50; land free on expiration of term. Government assessment to be paid by lender.
Húvinsigli	121	Do.	16	30	7	0	0	300	0	0	,,	Leased for 10 years for Rs. 300; land free on expiration of term. Government assessment to be paid by lender.
Cúndúr	47	Government.	37	22	45	0	0	400	0	0	,,	Leased for 6 years for Rs. 400; land free on expiration of term. Government to be paid by lender.
Karádgi	59	Do.	4	9	13	0	0					
								300	0	0	1874.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by owner of land.
Do.	73	Do.	3	33	3	0	0					
Gopgondankop	30	Do.	30	28	35	0	0	100	0	0	,,	Ditto.

APPENDIX A—*continued.*

Villages.	Survey Number.	Land, Inám or Government.	Acres.	Survey Assessment.	Amount realized.	Date of transaction.	Agreement entered into.	Information where obtained.
			A. g.	Rs. a. p.	Rs. a. p.			
Náráyenapur	33	Inám.	17 2	22 0 0	248 0 0	1874.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by owner of land.	
Sanklipur	32	Do.	19 33	21 0 0	1,000 0 0	Do.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by lender.	
Alipur	20	Do.	29 39	10 0 0	50 0 0	Do.	Ditto.	
Kalalkond	32	Government.	24 21	18 0 0	200 0 0	Do.	Ditto.	
Karaigi...	15	Do.	8 35	9 0 0	164 0 0	Do.	Ditto.	
Kalsúr	15	Inám.	40 30	46 0 0	1,000 0 0	Do.	Ditto.	
Mantgani	32	Do.	23 20	20 0 0	352 0 0	Do.	Ditto.	
Hire Múgdúr	35	Do.	26 8	29 0 0	225 0 0	Do.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by owner of land.	
Attigeri	141	Do.	24 20	21 0 0	300 0 0	Do.	Leased for 9 years for Rs. 300; land free on expiration of term. Government assessment to be paid by lender.	
Ganjúr	44	Government.	23 25	24 0 0	200 0 0	Do.	Leased for 13 years for Rs. 200; land free on expiration of term. Government assessment to be paid by owner of land.	
Basvankatti	21	Do.	24 8	17 0 0	170 0 0	Do.	Leased for 20 years for Rs. 170; land free on expiration of term. Government assessment to be paid by lender.	
Háveri	179	Inám.	6 26	3 8 0	50 0 0	Do.	Leased for 10 years for Rs. 50; land free on expiration of term. Government assessment to be paid by lender.	
Kalsúr	15	Do.	40 30	46 0 0	1,200 0 0	1875.	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by lender.	
Saúr	36	Do.	123 38	123 0 0	800 0 0	Do.	Ditto.	Registrar's Office.

Múnvali	19	Government.	29 11	27 0 0	100 0 0	„	Mortgaged; land free on payment of debt without further interest. Government assessment to be paid by owner of land.	Sub-
Chakapúr	10	Inám.	8 24	5 0 0				
Do.	48	Do.	5 26	8 0 0	200 0 0	„	Leased for 5 years for Rs. 200; land free on expiration of term. Government assessment to be paid by owner of land.	
Do.	52	Do.	16 2	18 0 0				
Kotigeri	1	Do.	2 19	3 0 0	100 0 0	„	Leased for 9 years for Rs. 100; land free on expiration of term. Government assessment to be paid by owner of land.	
Ditto	2	Do.	9 12	9 0 0				

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

APPENDIX B.

Price List for Karajgi and Háveri markets of certain agricultural products of the old Bankápur Táluka made out from information obtained from the Mámlatdár, and reduced to Indian Sers of 80 Tolas.

Years.	Jowári, sers per Rupee.	Wheat, sers per Rupee.	Gram, sers per Rupee.	Rice, sers per Rupee.	Túr, sers per Rupee.	Mug, sers per Rupee.	Matki, sers per Rupee.	Kulthi, sers per Rupee.	Bájri, sers per Rupee.	Rála, sers per Rupee.	Ragi alias Nachna, sers per Rupee.
1	2	3	4	5	6	7	8	9	10	11	12
1840	122	49	49	49	60	60	77	77	77	98	160
1841	122	49	49	49	60	60	77	77	77	98	160
1842	122	49	49	49	60	60	77	77	77	98	160
1843 ... — ...	112	46	46	43	53	56	75	92	76	97	157
1844	131	50	41	43	53	52	66	87	77	87	131
1845	125	45	45	45	53	50	73	81	60	100	160
1846	122	45	44	45	51	53	70	75	75	94	141
1847	120	40	37	40	48	47	64	71	62	87	141
1848	112	41	37	37	50	45	62	70	59	75	125
1849	101	37	36	39	46	41	50	61	77	70	111
Average ...	118·90	45·10	43·3	43·9	53·4	52·4	69·1	76·8	71·7	90·4	144·6
1850	109	45	36	43	44	44	84	66	60	79	120
1851	101	42	36	39	47	45	54	63	60	75	120
1852	23	16½	16	18	36	36	45	54	33	30	36
1853	48	30	27	28	45	47	52½	70½	52½	36	43
1554	48	41	30	30	46½	43½	46½	60	54	54	75
1855	21½	12	9½	15½	28½	28½	36	33	24½	22½	33
1856	36	27	24½	42	36	30	25½	27	30	42	55½
1857	45	36	30	24	33	33	42	34½	48	45½	63½
1858	54½	42½	35	24½	49	43	42½	47	42	47	68
1859	28	20	21	21	16	28	36	42	38	42	54
Average ...	51·4	31·2	26·5	28·5	38·1	37·8	46·4	49·7	44·2	47·3	66·8
1860	42½	28	21	26	35	39	42	42	35	35	52½
1861	22½	17½	15	14	21	24½	28	42	28	26	43½
1862	12	14	14	10½	17½	21	19	17½	14	17½	15½
1863	7	3½	3½	4½	5½	6½	9	14	9	10½	13½
1864	9	7	6½	7	9	10½	10½	14	10½	10½	10½
1865	24	16	14	16	20	16	20	20	24	24	32
1866	32	24	20	16	24	24	28	32	32	30	40
1867	40	20	20	16	25	24	28	30	40	32	44
1868	40	20	16	16	24	28	31	40	40	32	48
1869	36	24	17	20	28	30	32	48	32	32	56
Average ...	26·5	17·4	14·7	14·6	20.9	22·35	24·75	29·95	26·45	24·95	35·55
1870	48	24	16	24	26	26	32	48	32	32	56
1871	48	20	16	20	24	24	30	40	32	20	32
1872	26	16	12	16	21	24	29	32	12	12	17
1873	17	12	10	12	16	16	18	23	20	17	24
1874	43	14	14	21	20	18	20	24	30	40	24
Average ...	36·4	17·2	13·6	18·6	21·4	21·6	25·8	33·4	25·2	24·2	30·6

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

STATEMENT

APPENDIX C.

Revenue Statement for 137 *villages situated in the old Bankápur Táluka of the Dhárwár Collectorate in which the Survey Settlement was introduced in* 1846-47. *The years above the upper horizontal line are those antecedent to the first Survey Settlement, which was for* 30 *years, at the expiration of which a revision of the assessment took place, the result of which is shown below the lower horizontal line.*

Year.	Occupied Land paying Assessment to Government.						Unoccupied assessed arable Government Land.			Land the Revenue of which is alienated entirely or partially (Ina'm.)			Total Land—Government, Occupied and Unoccupied, and Ina'm.			Balance outstanding at close of year.
	Occupied acres.	Full standard assessment.	Remissions.			Balance for collection.	Acres.	Full assessment.	Realizations from auction sale of grazing.	Acres.	Full standard assessment.	Collections, quit rent, &c.	Total of Cols. 2, 8 & 11.	Full assessment Total of Cols. 3, 9, 12.	Collections, total of Cols. 7, 10, 13.	
			Permanent.	Casual.	Total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Rs.		Rs.	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1836-37 ..	72,824	1,08,508	..	46,417	46,417	62,091	45,818	22,586	215	93,060	94,088	33,944	2,11,702	2,25,182	96,253	17,912
1837-38 ..	73,695	1,15,394	..	21,865	21,865	96,529	45,339	22,070	152	93,020	94,096	43,764	2,11,754	2,34,560	1,40,445	32,038
1838-39 ..	66,491	1,09,502	..	34,969	34,969	74,533	52,157	29,421	274	93,104	94,137	32,937	2,11,742	2,33,060	1,07,804	701
1839-40 ..	69,784	1,04,415	..	6,740	6,740	97,675	51,877	27,483	329	90,081	92,317	45,958	2,11,742	2,24,225	1,41,957	1,048
1840-41 ..	70,197	1,04,349	..	11,829	11,829	92,520	50,495	27,261	390	91,072	92,319	43,282	2,11,764	2,23,929	1,36,192	1,166
1841-42 ..	68,394	1,03,249	..	10,535	10,535	92,714	52,272	27,591	459	90,045	90,014	43,070	2,10,711	2,20,854	1,35,243	6,929
1842-43 ..	66,342	1,01,289	..	9,323	9,323	91,966	55,638	32,800	1,205	89,210	88,700	42,091	2,11,190	2,22,789	1,35,242	3,762
1843-44 ..	60,203	93,850	..	3,206	3,206	90,644	62,462	42,471	73	88,592	91,442	42,528	2,11,262	2,27,763	1,33,245	4,652
1844-45 ..	56,691	88,636	..	836	836	87,800	66,938	47,164	46	87,645	90,927	41,847	2,11,274	2,26,727	1,29,693	2,073
1845-46 ..	54,077	85,671	..	3,695	3,695	81,976	69,999	50,754	3,461	87,051	91,129	41,114	2,11,127	2,27,554	1,26,551	790
1846-47 ..	78,333	78,336	..	6,536	6,536	71,800	50,571	27,877	2,683	96,473	95,355	37,620	2,25,382	2,01,568	1,12,103	13,202
1847-48 ..	82,314	79,644	..	126	126	79,518	46,611	24,527	5,060	96,457	92,312	27,542	2,25,382	1,96,483	1,23,020	31

1848-49 ..	87,311	88,696	..	102	102	83,436	42,144	20,975	7,795	95,895	91,947	37,632	2,25,340	1,96,463	1,28,863	43
1849-50 ..	89,203	84,087	..	10	10	84,077	41,844	21,489	7,722	94,254	90,842	37,089	2,25,301	1,96,438	1,28,375	...
1850-51 ..	91,943	84,823	..	10	10	84,813	39,563	20,951	5,834	93,855	90,054	36,868	2,25,201	1,96,438	1,27,515	29,181
1851-52 ..	100,510	89,450	..	14	14	89,436	31 590	16,863	5,186	93.202	90,124	36,398	2,25,302	1,96,437	1,31,020	..
1852-53 ..	101,644	89,948	..	10	10	89,838	30,890	16,854	5,212	92,788	88,735	36,183	2,25,302	1,96,437	1,31,233	...
1853-54 ..	103,995	89,466	..	..	..	89,466	28,826	17,449	5,618	92,653	89,501	42,971	2,25 274	1,96,416	1,37,755	47
1854-55 ..	107,744	92,716	..	48	48	92,668	25,420	14,580	5.125	92,097	88,904	42,832	2,25,361	1,96,400	1,40,125	72
1855-56 ..	114,429	96,395	..	19	19	96,376	19,004	11,464	3,990	91,830	88,548	42,247	2,25,263	1,96,407	1,42,613	...
1856-57 ..	124,167	1,02,355	..	1	1	1,02,354	9,289	5,525	2,166	91,807	88,527	42,624	2,25,263	1,96,407	1,47,144	...
1857-58 ..	127,483	1,04,482	..	..	..	1,04,482	6,019	3,433	1,364	91,751	88,493	42,553	2,25,203	1,96,407	1,48,309	..
1858-59 ..	127,570	1,04,757	..	..	..	1,04,757	6,005	3,216	1,403	91,688	88,420	42,799	2,25,263	1,96,393	1,48,959	...
1859-60 ..	128,947	1,05,497	..	..	..	1,05,497	4,723	2,572	1,403	91,579	88,316	42,905	2,25,249	1,96,385	1,49,895	..
1860-61 ..	131,782	1,07,410	..	..	..	1,07,410	2,448	1,164	979	91,062	87,833	43,046	2,25,277	1,96,407	1,58,435	..
1861-62 ..	133.230	1,08,681	..	..	..	1,08,681	2,601	902	912	89,499	86,928	42,843	2,25,330	1,96,411	1,59,436	..
1862-63 ..	133,938	1,08,278	..	..	..	1,08,278	1,958	757	1,032	89,431	86,776	42,847	2,25,330	1,96,411	1,59,757	...
1863-64 ..	134,660	1,09,083	..	..	..	1,09,083	1,202	532	2,058	89,468	86 796	42,854	2,25,350	1,96,411	1,60,905	...
1864-65 ..	134,660	1,09,083	..	..	..	1,09,083	1,197	529	2,113	89,473	86,799	42,875	2,25,320	1,96,411	1,60,871	...
1865-66 ..	134,827	1,09,207	..	..	..	1,09,207	1,204	534	1,481	89,299	86,670	42,891	2,25,330	1,96,411	1,60,079	..
1866-67 ..	134,827	1,09,178	..	..	..	1,09,178	1,165	482	1,506	89,307	86,696	42,850	2,25,289	1,96,356	1,60,034	...
1867-68 ..	134,698	4,09,103	..	..	..	1,09, 93	1,168	486	1,790	89,404	86,767	42,871	2,25,289	1,96,356	1,60,284	..
1868-69 ..	134,582	1,09,024	..	..	..	1,09,024	1,365	578	841	89,400	86,765	42,808	2,25,347	1,96,367	1,59,173	...
1869-70 ..	134,122	1,08,940	..	..	..	1,08,940	1,718	835	1,438	89,538	86,899	42,278	2,25,373	1,96,374	1,59,356	..
1870-71 ..	133,998	1,08,828	..	..	..	1,08,828	1,837	847	1,828	89,538	86,899	42,258	2,25,373	1,96,374	1,59,714	..
1871-72 ..	133.887	1,08,547	..	..	..	1,08,547	1,902	884	1,275	89,513	86,884	42,244	2,25,302	1,96,315	1,59,066	..
1872-73 ..	138,081	1,08,990	..	..	..	1,08,990	2,694	1,358	2,132	89,440	86,780	42,147	2,25,215	1,96,238	1,59,379	..
1873-74 ..	132,809	1,07,997	..	..	..	1,07,997	2,762	1,353	757	89,417	86,758	42,122	2,24,988	1,96,138	1,57,876	..
1874-75 ..	132,771	1,07,951	..	..	..	1,07,951	2,779	1,403	616	89,410	86,740	42,114	2,24,960	1,96,099	1,57,681	..
1875-76 ..	132,778	1,07,935	..	..	..	1,07,935	3,049	1,667	963	90,419	86,494	42,844	2,26,246	1,96,096	1,57,742	...
1876-77 ..	136,791	1,61,637	..	67	67	1,61,570	4,495	3.162	1,052	90,136	1,29,506	48,828	2,31,422	2,94,305	2,11,460	...
1877-78 ..	137,273	1,62,270	..	..	..	1,62,270	4,667	3,442	1,277	89,451	1,25,574	51,543	2,31,391	2,94,286	2,15,090	258
1878-79 ..	134,481	1,61,044	..	..	..	1,61,044	8,426	4,701	935	89,437	1,28,532	56,860	2,32,344	2,94,277	2,15,889	952
1879-80 ..	131,902	1,59,172	..	...	..	1,59,172	11,909	6,989	1,139	89,551	1,28,072	57,110	2,32,862	2,94,233	2,17,421	509

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

SUPPLEMENT TO APPENDIX C.

Revenue Statement for one village Byahatti now situated in the Hubli Táluka of the Dhárwár Collectorate, in which the Survey Settlement was introduced in 1846-47.

Year.	Occupied Land paying Assessment to Government.						Unoccupied assessed arable Government Land			Land the revenue of which is alienated entirely or partially (Inám.)			Total Land, Government, occupied & unoccupied, and Inám.			Balance outstanding at close of year.
	Occupied acres.	Full standard assessment.	Remissions.			Balance for collection.	Acres.	Full assessment.	Realizations from auction sale of grazing.	Acres.	Full standard assessment.	Collections, quit-rent, &c.	Total of Columns 2,8 & 11.	Full assessment, total of Columns 3,9,12.	Collections, total of Columns 7,10,13.	
			Permanent.	Casual.	Total.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1844-45 ..	7,720	11,047	...	3,597	3,597	7,450	258	...	...	6,190	...	3,726	14,168	...	11,176	...
1845-46 ...	7,415	7,151	...	2,047	2,047	5,104	818	..	375	5,935	...	4,165	14,168	...	9,644	2,116
1846-47 ...	6,633	6,500	...	442	442	6,058	2,442	2,303	574	6,584	6,144	4,561	15,659	14,947	11,193	37
1847-48 ...	8,282	8,079	...	79	79	8,000	1,043	965	208	6,334	5,903	4,886	15,659	14,947	13,094	769
1848-49 ...	7,875	7,681	...	...	...	7,681	1,466	1,376	283	6,318	5,890	4,819	15,659	14,947	12,783	37
1849-50 ...	7,861	7,685	...	...	...	7,685	1,479	1,372	450	6,319	5,890	4,886	15,659	14,947	13,021	37
1850-51 ...	7,731	7,568	...	...	...	7,568	1,744	1,612	367	6,184	5,767	4,761	15,659	14,947	12,696	3,070
1851-52 ...	9,154	8,904	...	...	...	8,904	828	767	346	5,677	5,276	4,491	15,659	14,947	13,741	...
1852-53 ..	9,908	9,607	...	...	...	9,607	74	64	39	5,677	5,276	4,491	15,659	14,947	14,137	...
1853-54 ...	9,908	9,607	...	...	...	9,607	74	64	49	5,677	5,276	4,491	15,659	14,947	14,147	...
1854-55 ...	9,982	9,671	...	...	...	9,671	...	...	...	5,677	5,276	4,491	15,659	14,947	14,162	...
1855-56 ...	9,982	9,671	...	...	...	9,671	...	...	...	5,677	5,276	4,491	15,659	14,947	14,162	...

1856-57 ...	9,982	9,671	...	...	...	9,671	...	...	...	5,677	5,276	4,491	15,659	14,947	14,162	...
1857-58 ...	9,981	9,670	...	...	...	9,670	...	...	...	5,675	5,272	4,503	15,656	14,942	14,173	...
1858-59 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,487	15,656	14,942	14,264	...
1859-60 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,354	15,656	14,942	14,131	...
1860-61 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,354	15,656	14,942	14,131	...
1861-62 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,485	15,656	14,942	14,262	...
1862-63 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,484	15,656	14,942	14,261	...
1863-64 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,484	15,656	14,942	14,261	...
1864-65 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,457	15,656	14,942	14,234	...
1865-66 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,456	15,656	14,942	14,233	...
1866-67 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,456	15,656	14,942	14,233	..
1867-68 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,456	15,656	14,942	14,233	..
1868-69 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	...
1869-70 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	..
1870-71 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	...
1871-72 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	...
1872-73 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	...
1873-74 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,195	4,451	15,656	14,942	14,228	...
1874-75 ...	10,090	9,777	...	...	...	9,777	...	...	...	5,566	5,165	4,451	15,656	14,942	14,228	...
1875-76 ...	10,057	9,743	...	...	...	9,743	...	...	...	5,560	5,157	4,443	15,617	14,900	14,186	...
1876-77 ...	10,122	16,491	..	...	...	16,491	...	...	...	5,565	8,759	4,442	15,687	25,250	20,933	...
1877-78 ...	10,122	16,491	...	...	...	16,491	...	...	...	5,565	8,759	4,653	15,687	25,250	21,144	...
1878-79 ...	10,122	16,491	...	...	...	16,491	...	...	...	5,565	8,759	4,648	15,687	25,250	21,139	36
1879-80 ...	10,122	16,491	...	..	...	16,491	...	...	...	5,576	8,759	4,648	15,698	25,250	21,139	...

Note.—The years above the upper horizontal line are those antecedent to the first survey settlement, which was for 30 years, at the expiration of which a revision of the assessment took place, the result of which is shown below the lower horizontal line.

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

APPEN

General Statement referred to in Para. 70 of the Survey and

Former Táluka.	Present Táluka.	Number.	Name of Village.	Maximum dry-crop rate.	BY FORMER SURVEY.									
					Total arable acres, including Inám.	Total unarable acres.	Government occupied Land.							
							Dry-crop.		Rice.		Garden.		Total.	
							Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			1st Class.	1st Class.				Rs.		Rs.		Rs.		Rs.
				Rs. a.										
Old Bankápur.	Hángal.	1	Belwatti	1 8	1,681	585	681	451	223	345	14	100	898	896
		2	Belgal	Do.	1,788	480	812	628	299	706	7	48	1,118	1,382
		3	Kadshettihalli	Do.	1,068	93	727	657	77	166	..	..	804	823
		4	Badamugatti	Do.	739	351	197	130	125	206	..	..	322	336
			Total of the 1st Class ..	..	5,276	1,509	2,397	1,866	724	1,423	21	148	3,142	3,437
				2ndClass.										
	Bankápur.	5	Kotigeri	2 0	1,569	370	987	1,122	..	..	..	..	987	1,122
		6	Chanpúr	Do.	985	140	377	314	..	..	..	..	377	314
		7	Narayanpár	Do.	649	45	378	446	5	10	..	..	383	456
		8	Múktasrikatti	Do.	759	94	326	273	114	267	..	..	440	540
		9	Nidgúndi	Do.	663	246	184	201	85	192	..	..	269	393
		10	Jakinkatti	Do.	531	102	185	117	71	86	..	..	256	203
		11	Hotúr	Do.	1,089	57	604	582	30	84	..	..	634	616
		12	Belad Basrikatti	Do.	243	92	80	69	33	56	..	..	113	118
		13	Jalikatti	Do.	476	7	296	340	..	..	..	..	296	340
		14	Madli	Do.	1,340	104	653	510	215	466	..	..	868	976
		15	Kamanhalli	Do.	858	305	230	102	131	212	..	..	851	314
		16	Shadambi	Do.	2,075	100	1,024	872	175	499	..	..	1,199	1,371
		17	Gotgaddi	Do.	1,058	349	400	204	71	135	..	..	471	339
		18	Nagnúr	Do.	375	157	159	108	12	21	..	..	171	129
		19	Atigeri	Do.	4,345	299	1,786	1,429	..	..	..	..	1,786	1,429
		20	Shiavinhal	Do.	2,101	124	1,114	800	6	16	..	..	1,150	816
		21	Gowanhál	Do.	1,355	32	1,041	728	..	..	..	..	1,041	728
		22	Chaudhal	Do.	2,641	277	2,224	927	2	7	61	149	2,287	1,083
		23	Taredkop	Do.	411	13	268	241	..	..	..	..	268	241
		24	Chilturbadni	Do.	2,037	898	1,317	647	7	17	2	8	1,326	672
		25	Yaliwigi	Do.	5,278	1,629	2,214	1,287	61	163	5	15	2,280	1,465
		26	Raulojikop	Do.	782	375	561	350	14	40	..	..	575	390
		27	Alipúr	Do.	490	1,011	241	132	11	25	..	..	252	157
		28	Bisatikop	Do.	426	48	103	78	39	62	..	..	142	140
		29	Sirbadgi	Do.	1,909	533	1,057	401	45	112	91	520	1,193	1,033
		30	Bewinhalli	Do.	910	271	518	212	..	..	..	..	518	212
		31	Kadkol	Do.	3,376	134	1,943	1,331	15	23	..	..	1,958	1,354
		32	Hatimatúr	Do.	8,460	621	5,521	2,857	68	161	67	523	5,656	3,541
		33	Jellapúr	Do.	1,345	211	965	609	..	..	..	..	965	609
		34	Kalalkond	Do.	1,951	305	1,415	644	8	13	..	..	1,423	657
		35	Talihali	Do.	1,682	91	946	517	..	..	..	..	946	517
		36	Kalsúr	Do.	1,635	181	908	845	5	7	..	..	913	852
		37	Hosball	Do.	1,276	66	891	857	..	..	..	..	891	857
		38	Mantgani	Do.	1,247	73	673	643	..	..	..	..	673	643
		39	Kallhál	Do.	2,117	447	1,492	764	..	..	..	..	1,492	764
		40	Rumapur	Do.	451	67	217	200	..	..	..	..	217	209
		41	Totada Yellápur	Do.	1,101	47	693	514	..	..	..	..	693	514
		42	Kalkoti	Do.	1,336	73	674	708	..	..	..	..	674	708
		43	Nirigi	Do.	1,130	92	474	472	..	..	..	..	474	472
		44	Hire Mugdur	Do.	1,727	56	784	762	..	..	..	..	781	764
		45	Chik Mugdur	Do.	557	55	299	300	..	..	..	..	299	300
		46	Arlihali	Do.	834	93	420	460	..	..	..	..	420	460
		47	Bhawitimapúr	Do.	517	13	321	343	..	..	..	..	321	343
		48	Yellápur	Do.	1,988	111	1,416	792	5	9	..	..	1,421	801
		49	Karajgi	Do.	5,952	1,155	2,382	2,899	4	6	..	..	3,386	2,905
		50	Kolur	Do.	2,595	332	1,554	1,372	13	30	..	..	1,567	1,402
		51	Ganjur	Do.	1,588	711	927	524	..	..	..	..	927	524
		52	Arabgond	Do.	1,145	585	789	350	3	4	..	..	792	354
		53	Aladkatti	Do.	1,823	72	1,188	1,094	30	52	..	..	1,218	1,146
		54	Bilebál	Do.	661	31	421	470	..	..	..	..	421	470
	Hubli		Total of the 2nd Class ..	..	79,878	13,340	46,660	32,301	1,278	2,775	226	1,215	48,164	36,291

DIX D.

Settlement Commissioner, Southern Division's letter No. 7 of 4th January 1876.

BY REVISION SURVEY.

Total arable acres, including inams.	Total unarable acres.	Government occupied Land. Dry-crop. Acres.	Dry-crop. Assessment.	Rice. Acres.	Rice. Assessment.	Garden. Acres.	Garden. Assessment.	Total. Acres.	Total. Assessment.	Unoccupied waste. Acres.	Unoccupied waste. Assessment.	Average assessment on Government land per acre.	Increase of assessment per cent.
16	17	18	19	20	21	22	23	24	25	26	27	28	29
			Rs.		Rs.		Rs.		Rs.		Rs.	Rs. a. p.	
1,740	533	725	492	192	919	18	177	935	1,588	89	89	1 11 7	77·2
1,926	347	954	608	273	1,129	25	217	1,252	1,954	108	228	1 9 8	41·4
1,081	91	720	605	87	202	8	11	815	818	39	37	1 0 0	..
899	196	344	129	130	462	..	..	474	591	59	44	1 3 1	75·9
5,646	1,167	2,743	1,834	682	2,712	51	405	3,476	4,951	245	398	1 7 0	44·1
1,610	251	1,059	1,536	3	5	..	..	1,062	1,541	6	10	1 7 3	37·3
986	150	369	420	1	2	..	..	370	422	..	..	1 2 3	34·4
659	47	416	652	3	8	..	..	419	660	..	..	1 9 2	44·7
758	100	336	326	103	283	..	..	439	609	26	12	1 5 4	12·8
687	234	204	196	83	220	2	4	289	420	..	..	1 7 3	6·9
533	99	172	126	85	194	..	..	257	320	18	34	1 4 7	57·6
1,082	58	600	616	40	95	4	17	644	728	..	..	1 2 1	12·7
249	91	85	76	33	85	..	..	118	161	..	..	1 5 10	36·4
487	2	305	488	..	..	..	..	305	488	..	..	1 9 7	43·5
1,354	117	613	768	264	803	..	..	877	1,571	88	129	1 12 2	61
973	211	263	116	116	342	..	..	379	458	77	20	1 0 9	45·9
2,026	108	1,022	1,048	181	741	..	..	1,203	1,789	206	230	1 6 11	30·5
1,166	265	485	308	68	263	..	..	553	571	79	62	1 0 0	68·4
375	158	160	158	16	36	..	..	176	194	..	..	1 1 8	50·4
4,425	214	1,857	2,342	1	1	..	..	1,858	2,343	..	..	1 4 2	64
2,114	75	1,164	1,040	7	15	..	..	1,171	1,055	..	..	0 14 5	29·3
1,339	43	1,027	858	4	8	..	..	1,031	866	..	..	0 13 5	19
2,750	161	2,305	1,048	78	167	4	16	2,387	1,231	..	..	0 8 3	13·7
409	18	273	372	..	..	..	..	273	372	..	..	1 5 10	54·4
2,244	718	1,326	784	46	83	8	25	1,380	892	168	40	0 9 8	32·7
4,350	569	2,870	1,488	115	571	46	304	3,031	2,363	294	74	0 11 9	61·3
833	328	520	502	18	51	2	7	540	560	14	18	1 0 8	43·6
1,884	103	301	106	8	21	..	..	309	187	815	252	0 6 3	19·1
446	38	90	68	56	177	..	..	146	245	..	..	1 10 10	75
2,052	459	1,140	610	77	258	79	605	1,296	1,373	..	..	1 0 11	32·9
1,116	73	576	334	3	3	5	8	584	345	127	36	0 8 6	62·7
3,416	144	1,971	1,950	13	23	..	..	1,984	1,973	..	..	0 15 11	45·7
8,503	525	5,552	4,469	77	415	75	676	5,704	5,560	..	..	0 15 7	57
1,433	131	1,001	908	1	2	..	..	1,002	910	50	22	0 14 2	49·4
2,074	286	1,482	932	16	30	..	..	1,498	962	38	6	0 10 1	46·4
1,703	74	946	756	2	3	..	..	948	759	20	20	0 12 11	46·8
1,659	110	918	1,446	3	10	..	..	921	1,456	3	4	1 9 3	70·9
1,292	71	891	474	6	11	..	..	897	485	..	..	0 8 8	35·9
1,245	80	672	1,102	..	..	1	1	673	1,103	..	..	1 10 3	71·5
2,088	429	1,436	1,126	..	..	1	2	1,437	1,128	137	32	0 11 9	47·6
483	37	213	332	6	14	..	..	219	346	27	6	1 6 11	65·6
1,102	46	700	910	1	1	..	..	701	911	..	..	1 4 10	77·2
1,341	73	675	1,074	..	..	..	..	675	1,074	..	..	1 9 5	51·7
1,152	97	414	614	..	..	..	..	414	614	..	..	1 7 9	30·1
1,788	60	783	1,162	..	..	..	..	783	1,162	2	2	1 7 9	52·5
568	52	299	494	1	1	..	..	300	495	..	..	1 10 5	65
904	43	482	802	1	2	..	..	483	804	..	..	1 10 8	74·8
519	17	320	546	..	..	..	..	320	546	..	..	1 11 4	59·2
2,089	74	1,453	1,344	3	10	5	7	1,461	1,361	..	..	0 14 11	69·9
6,397	715	3,702	4,885	4	5	1	1	3,707	4,891	225	141	1 4 6	68·4
2,622	246	1,588	2,330	31	56	..	..	1,599	2,386	..	..	1 7 10	70·2
1,743	505	957	874	2	2	..	..	959	876	101	28	0 13 8	67·2
1,393	347	834	554	8	12	..	..	842	566	211	72	0 9 8	59·9
1,824	88	1,173	1,566	40	92	..	..	1,213	1,658	..	..	1 5 10	44·7
663	32	423	688	..	..	..	..	423	688	..	..	1 10 0	46·4
84,290	9,138	48,403	47,684	1,624	5,121	233	1,673	50,260	54,478	2,732	1,250	1 0 10	50·1

APPENDIX

Former Táluka.	Present Táluka.	Number.	Name of Village.	Maximum dry-crop rate.	BY FORMER SURVEY.									
					Total arable acres, including fallow.	Total unarable acres.	Government occupied Land.							
							Dry-crop.		Rice.		Garden.		Total.	
							Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
				3rd Class Rs. a				Rs.		Rs.		Rs.		Rs.
				2 4										
Old Bankápur.	Old Bánkapur.	55	Ankadkhan	Do.	883	262	480	546	28	84	6	20	514	650
		56	Munwali	Do.	1,236	99	649	618	10	31	5	20	664	669
		57	Kajapur	Do.	1,108	40	286	336	...	..	..	..	286	336
		58	Shiggaon	Do.	4,066	506	1,569	1,252	181	498	119	1,133	1,859	2,878
		59	Wanhalli	Do.	1,030	121	384	202	94	187	..	..	478	389
		60	Ganjigatti	Do.	790	96	392	316	13	26	..	..	405	342
		61	Banur	Do.	1,585	110	851	803	2	4	..	..	853	807
		62	Mugli	Do.	1,221	114	672	440	43	70	..	..	715	510
		63	Chik Malur	Do.	1,035	39	360	445	..	..	..	..	369	445
		64	Chakapur..	Do.	1,061	84	473	525	..	..	..	..	473	525
		65	Hire Mankatti	Do.	1,550	139	880	544	97	230	..	..	977	774
		66	Bolgali	Do.	704	308	336	230	..	..	42	101	378	331
		67	Chik Bondigeri	Do.	293	40	186	158	8	25	..	..	194	183
		68	Karadji	Do.	2,727	483	902	756	4	7	68	455	974	1,218
		69	Hulgur	Do.	4,611	175	2,685	2,587	..	..	8	24	2,693	2,611
		70	Baswanhál	Do.	2,007	96	1,435	1,387	3	9	4	12	1,442	1,408
		71	Pant atti	Do.	1,106	62	407	421	...	..	..	..	407	421
		72	Hire Harkuni	Do.	3,745	156	2,274	2,315	..	..	..	..	2,274	2,315
		73	Chik Harkuni	Do.	930	35	320	322	..	..	..	..	320	322
		74	Bulpankop	Do.	1,269	30	685	743	..	..	..	..	635	743
		75	Guranhali	Do.	1,087	30	437	562	..	..	..	..	437	562
		76	Belwalkop	Do.	1,799	52	1,337	1,609	..	..	..	..	1,337	1,609
		77	Hire Bondigeri	Do.	2,261	537	537	356	...	..	84	218	621	574
		78	Matikatti	Do.	1,299	150	630	753	13	33	..	..	643	786
		79	Hanmanhali	Do.	686	46	306	208	50	91	..	..	356	299
		80	Ramapur	Do.	770	53	359	428	1	5	..	..	360	433
		81	Kyalkond	Do.	3,095	161	1,488	1,546	..	..	..	..	1,488	1,546
		82	Kengapur	Do.	583	49	479	329	1	2	..	..	480	331
		83	Mantrawadi	Do.	2,310	193	1,378	977	25	52	..	..	1,403	1,029
		84	Gopgondankop	Do.	752	57	413	431	..	..	..	..	413	431
		85	Kurbarmalur	Do.	1,633	60	801	749	..	..	..	..	801	749
		86	Kalmadu	Do.	881	40	509	552	..	..	..	..	509	552
		87	Manangi	Do.	1,256	79	624	617	..	..	..	..	624	617
		88	Kunimelihali	Do.	1,328	76	874	991	..	..	..	..	874	991
		89	Bardur	Do.	1,221	49	700	815	..	..	..	..	700	815
		90	Chulal	Do.	864	38	355	400	..	..	..	..	355	400
		91	Nirlgi	Do.	1,158	46	738	688	..	..	..	..	738	688
		92	Sawur	Do.	1,243	33	544	637	..	..	..	..	544	637
		93	Mahur	Do.	783	27	358	377	..	..	..	..	358	377
		94	Tegihali	Do.	1,893	64	763	872	3	6	..	..	766	878
		95	Hire Nelur	Do.	441	44	199	202	..	..	..	..	199	202
		96	Chik Nelur	Do.	1,049	43	496	581	..	..	..	..	496	581
		97	Mothali	Do.	354	35	199	162	..	..	..	..	199	162
		98	Hire Malur	Do.	1,281	67	700	805	..	..	..	..	700	805
		99	Kankanwad	Do.	583	46	390	425	..	..	..	..	390	425
		100	Hurlikupi	Do.	2,332	290	1,175	1,076	3	6	..	..	1,178	1,082
		101	Ingalgi	Do.	2,664	78	2,040	2,442	..	..	..	..	2,040	2,442
		102	Hire Budihal	Do.	1,804	59	734	914	..	..	..	..	734	914
		103	Gundur	Do.	1,494	89	883	833	..	..	..	..	883	833
		104	Devageri	Do.	5,704	1,078	4,154	4,194	29	86	4	18	4,187	4,298
		105	Somapur	Do.	472	38	437	406	..	..	..	..	437	406
	Kanagi.	106	Haweri	Do.	3,483	714	1,699	1,351	..	..	260	2,294	1,959	3,645
			Total of the 3rd Class ..	..	81,110	7,356	42,311	42,234	608	1,447	600	4,295	44,019	47,976
				4th Class Rs. a										
				1 10										
Bankápur.		107	Huwin Shigli	Do.	3,380	261	2,208	1,128	..	..	..	..	2,208	1,128
		108	Sanklipur	Do.	1,402	83	677	473	..	..	..	..	677	473
		109	Kalas	Do.	5,019	811	3,410	2,106	45	75	1	2	3,456	2,183
		110	Kankapur	Do.	1,070	143	857	481	..	..	..	..	857	481

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BY REVISION SURVEY.													
GOVERNMENT OCCUPIED LAND.										Unoccupied waste.		Average assessment on Government land per acre.	Increase of assessment per acre.
Total arable acres, including inám.	Total unarable acres.	Dry-crop.		Rice.		Garden.		Total.					
		Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.		
16	17	18	19	20	21	22	23	24	25	26	27	28	29
			Rs.		Rs.		Rs.		Rs.		Rs.	Rs. a. p.	
901	380	500	913	11	35	28	70	539	1,018	2	2	1 14 2	56·6
1,241	90	644	895	17	49	10	28	671	972	..	..	1 7 2	45·3
1,105	35	293	558	..	..	..	..	293	558	..	..	1 14 6	66·1
4,197	416	1,648	1,926	175	535	155	1,356	1,978	3,817	170	87	1 13 1	39·6
1,054	123	388	290	20	247	8	21	486	558	..	..	1 2 4	43·4
842	49	384	486	24	64	..	..	408	550	48	9	1 3 7	60·8
1,008	101	859	1,339	2	4	2	3	863	1,346	..	..	1 8 11	66·8
1,295	46	723	797	35	91	..	..	758	888	13	2	1 2 6	74·1
1,069	45	363	724	..	..	5	11	368	735	..	..	1 15 11	65·2
1,088	61	482	857	2	5	..	..	484	862	..	..	1 12 6	64·2
1,593	91	922	722	95	254	1	1	1,018	977	1	2	0 15 4	26·2
723	285	363	351	18	45	..	..	381	396	..	..	1 0 8	19·6
294	87	189	220	7	12	..	..	196	232	..	..	1 2 8	26·8
2,794	426	973	1,112	9	12	74	619	1,056	1,743	..	..	1 10 5	48·1
4,670	177	2,727	3,646	4	11	27	55	2,758	3,712	..	..	1 5 6	42·2
2,050	56	1,468	2,185	2	4	6	10	1,474	2,199	..	..	1 7 10	56·2
1,720	54	425	666	1	1	..	..	426	667	..	..	1 9 1	51·3
3,751	156	2,280	4,354	..	..	..	..	2,280	4,354	..	..	1 14 10	88·1
926	38	318	556	..	..	..	..	318	556	..	..	1 12 0	72·7
1,275	29	632	1,280	..	..	..	..	632	1,280	..	..	2 0 5	72·3
1,097	44	440	898	..	..	..	..	440	898	..	..	2 0 8	59·8
1,611	46	1,348	2,466	..	..	..	..	1,348	2,466	..	..	1 13 3	53·3
2,367	417	560	419	79	265	..	..	639	684	61	13	0 15 11	19·2
1,291	158	653	1,174	2	5	..	..	655	1,179	..	..	1 12 10	50·
698	48	319	281	41	98	..	..	360	379	76	27	0 14 11	28·8
778	26	363	657	..	..	..	..	363	657	..	..	1 13 0	51·7
3,137	132	1,571	2,234	2	2	..	..	1,573	2,236	..	..	1 6 9	44·0
594	45	489	463	2	4	..	..	491	467	10	5	0 15 1	41·1
2,438	101	1,508	1,490	21	48	2	4	1,531	1,542	..	..	1 0 1	49·9
748	48	414	743	..	..	..	..	414	743	..	..	1 12 9	72·4
1,634	57	795	1,127	..	..	..	..	795	1,127	..	..	1 6 8	50·5
877	31	501	862	..	..	..	..	501	862	..	..	1 11 6	56·2
1,282	117	541	1,064	..	..	..	..	541	1,064	..	..	1 15 6	72·4
1,353	101	895	1,742	..	..	..	..	895	1,742	..	..	1 15 2	76·3
1,207	53	697	1,294	..	..	..	..	697	1,294	..	..	1 13 8	58·9
866	45	355	614	..	..	3	4	358	618	..	..	1 11 7	54·5
1,161	58	741	1,244	..	..	..	..	741	1,244	..	..	1 10 10	80·3
1,241	49	509	993	..	..	..	..	509	993	..	..	1 15 1	55·4
781	27	355	610	..	..	..	..	355	610	..	..	1 11 6	61·8
1,405	61	773	1,393	..	..	..	..	773	1,393	..	..	1 12 10	68·7
439	49	194	333	..	..	..	..	194	333	..	..	1 11 6	64·8
1,060	43	500	981	..	..	..	..	500	981	..	..	1 15 5	68·8
360	37	223	290	..	..	..	..	223	290	..	..	1 4 10	79·
1,290	58	712	1,240	1	2	..	..	713	1,242	1	2	1 11 2	54·3
594	23	396	718	..	..	..	..	396	718	2	5	1 13 1	68·0
2,419	81	1,203	1,874	4	9	5	15	1,212	1,898	..	..	1 9 1	75·4
2,684	96	2,057	4,061	..	..	..	..	2,057	4,061	..	..	1 15 7	66·8
1,824	57	739	1,512	..	..	..	..	739	1,512	2	5	2 0 9	65·4
1,522	103	896	1,438	..	..	5	9	901	1,447	..	..	1 9 8	73·7
5,773	1,038	4,196	6,956	30	105	23	42	4,249	7,102	..	..	1 10 9	66·2
467	41	430	733	..	..	..	..	430	733	..	..	1 11 3	80·5
3,684	542	1,728	2,218	53	320	234	2,621	2,015	5,059	142	143	2 6 7	98·8
82,483	6,527	43,660	67,995	727	2,227	588	4,769	44,975	74,991	528	302	1 10 6	56·3
3,456	170	2,288	1,342	10	16	..	..	2,248	1,358	..	..	0 0 8	20·9
1,424	67	670	590	2	1	..	..	672	591	..	..	0 14 1	24·9
5,188	708	3,571	2,783	41	76	3	5	3,618	2,864	..	..	0 12 8	31·2
1,153	101	886	676	2	3	1	1	889	680	27	11	0 12 1	41·4

APPENDIX

Former Taluka.	Present Taluka.	Number.	Name of Village.	Maximum dry-crop rate.	BY FORMER SURVEY.									
					Total arable acres, including inam.	Total unarable acres.	Government occupied Land.							
							Dry-crop.		Rice.		Garden.		Total.	
							Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
				4th Class				Rs.		Rs.		Rs.		Rs.
Old Bankápur.	Karajgi.	111	Hire Marlihall	Rs. a. 1 10	2,097	738	1,520	449	..	..	..	..	1,520	449
		112	Chik Marlihall	Do.	1,542	96	956	374	..	..	..	..	956	374
		113	Krishnapur	Do.	1,020	426	531	133	..	..	...	..	531	133
		114	Hesrur	Do.	3,331	2,019	1,950	667	..	..	..	..	1,950	667
		115	Ichal Yellapur	Do.	613	435	457	205	..	..	..	..	457	205
		116	Gaurapur	Do.	530	47	424	306	..	..	..	..	424	306
		117	Baswankatti	Do.	703	312	434	280	..	..	..	..	434	280
		118	Hule Riti	Do.	1,308	328	924	476	..	..	..	..	924	476
		119	Pirapur	Do.	949	884	708	191	..	..	..	..	708	191
		120	Agasanmatti	Do.	382	98	256	143	..	..	..	..	256	143
		121	Sirmapur	Do.	790	50	526	562	..	..	..	..	526	562
		122	Yalgach	Do.	2,942	121	1,816	1,135	..	..	..	..	1,816	1,135
		123	Machapur	Do.	474	17	246	262	..	..	..	..	246	262
		124	Hos Riti	Do.	2,431	939	1,081	748	..	..	..	..	1,081	748
		125	Chenur	Do.	894	59	455	410	..	..	..	..	455	410
		126	Kordur	Do.	983	102	406	390	..	..	..	..	406	390
		127	Ichangi	Do.	3,738	288	2,381	1,351	..	..	..	..	2,381	1,351
		128	Bhairapur	Do.	641	72	420	190	..	..	..	..	420	190
		129	Kittur	Do.	2,349	246	718	530	..	..	..	..	718	530
		130	Molmari	Do.	1,960	145	1,018	549	..	..	..	..	1,018	549
		131	Surangi	Do.	8,192	1,446	6,431	2,653	..	..	9	29	6,440	2,682
			Total of the 4th Class ..	Do.	48,042	10,660	30,310	16,187	45	75	10	31	30,365	16,293
				5th Class										
	Karajgi. Bankapur.	132	Futgaonbadni	Rs. a. 1 6	2,258	234	1,520	902	..	..	..	..	1,520	902
		133	Kondlkop	Do.	827	27	569	184	..	..	..	..	569	184
		134	Konerihop	Do.	488	10	453	245	..	..	..	..	453	245
		135	Wadwi	Do.	2,160	396	1,053	675	..	..	2	8	1,055	683
		136	Konchgeri	Do.	3,608	332	2,757	1,544	..	..	7	25	2,764	1,569
		137	Bijúr	Do.	913	158	720	371	..	..	..	..	720	371
			Total of the 5th Class ..	Do.	10,054	1,157	7,072	3,921	..	..	9	33	7,081	3,954
			Grand Total ..	Do.	224,990	34,028	1,29,250	96,509	2,655	5,720	866	5,722	132,771	1,07,951

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BY REVISION SURVEY.													
GOVERNMENT OCCUPIED LAND.													
Total unarable acres including inam.	Total unarable acres.	Dry-crop.		Rice.		Garden.		Total.		Unoccupied waste.		Average assessment on Government land per acre.	Increase of assessment per cent.
		Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.		
16	17	18	19	20	21	22	23	24	25	26	27	28	29
			Rs.		Rs.		Rs.		Rs.		Rs.	Rs. a. p.	
2,353	512	1,780	764	6	7	1	5	1,787	776	...	..	0 6 11	72·8
1,589	55	1,007	478	1	2	..	...	1,008	480	305	68	0 6 8	23·3
1,064	396	542	221	..	..	..	..	542	221	..	..	0 6 6	66·2
3,771	1,500	2,161	824	2	3	..	..	2,163	827	266	73	0 5 11	24·
651	384	474	320	..	..	..	..	474	320	11	11	0 10 11	56·1
570	15	426	417	1	3	..	..	427	420	36	5	0 14 8	37·3
713	309	431	390	..	..	10	29	441	419	..	..	0 15 2	49·6
1,317	807	958	649	..	..	..	..	958	649	..	..	0 10 10	36·3
983	839	728	265	2	2	2	2	732	269	170	39	0 5 6	40·8
448	65	300	229	..	..	..	..	300	229	..	..	0 12 3	60·1
800	38	532	747	..	..	..	..	532	747	..	..	1 6 6	32·9
2,928	128	1,312	1,568	..	..	..	..	1,312	1,568	..	..	1 3 1	38·1
475	24	237	346	..	..	..	..	237	346	10	11	1 7 2	32·1
2,492	896	1,108	1,083	..	..	17	17	1,125	1,100	..	..	0 15 8	47·1
897	4	457	574	..	..	..	..	457	574	..	..	1 4 1	40·
984	95	406	515	..	..	..	..	406	515	..	..	1 4 4	32·1
3,802	255	2,441	1,917	1	3	4	5	2,446	1,925	..	..	0 12 7	42·5
651	19	427	276	..	..	..	..	427	276	..	..	0 10 4	45·3
12,388	169	787	840	..	..	..	..	787	840	89	23	0 15 9	58·5
9,1178	117	1,025	698	1	1	..	..	1,026	699	375	111	0 9 8	27·3
698	458	6,403	3,417	..	..	24	24	6,427	3,441	1,468	335	0 7 8	38·3
51,235	8,131	31,307	21,929	72	117	62	88	31,441	22,134	2,747	687	0 10 8	35·8
2,36	140	1,592	1,244	..	..	2	2	1,594	1,246	4	1	0 12 6	38·1
622	18	569	221	..	..	..	..	569	221	..	..	0 6 3	20·1
42	9	456	341	..	..	..	..	456	341	..	.	0 12 0	29·3
2,198	380	1,073	766	..	..	4	5	1,077	771	..	..	0 11 5	12·9
3,613	309	2,736	1,871	..	..	17	15	2,753	1,886	..	..	0 10 10	20·2
924	73	724	337	..	..	8	6	732	383	..	..	0 8 4	3·2
10,221	929	7,150	4,820	..	..	31	28	7,181	4,848	4	1	0 10 10	22·6
238,884	25,892	138,263	1,44,262	3,105	10,177	965	6,963	137,333	1,61,402	6,256	2,638	1 2 3	40·5

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

Extract from letter No. 427 of 20th October 1875, to the address of Survey and Settlement Commissioner, S. D., from Captain C. W. Godfrey, Deputy Superintendent, Revenue Survey, S.M.C.

Garden crops.

15. The garden crops in the villages under report are generally very superior and in a very good state of cultivation. The garden cultivation is principally under large tanks with a plentiful supply of water and where the natural moisture of the soil, due to water percolating through bed of the tank and thence through the gardens, which are situated on a lower level, make it easy to grow fine crops of sugarcane, panvél-sooparee or betel-nut trees and cocoanuts. These crops grow in luxuriant abundance and fullness in the gardens of Shiggaon, Háveri, Karajgi, Hati Mattúr, Yelwagi, Shirbadgi, Belwatti and Belgal. These eight villages alone have 1,102 acres of garden land under splendid tanks. Most of the gardens have also small wells or rather holes dug a few feet deep to obtain water for irrigation, when by any chance the tank water runs short, or in consequence of a very dry season extra irrigation is required; but these wells are seldom used. It is, however, remarkable that even in very dry seasons, when the tank above is quite dried up, as occasionally occurs, these wells or holes always have water in them sufficient to keep the gardens flourishing. There are, besides, small gardens in fifty-one other villages amounting in all to 409 acres. Minor garden crops and irrigated dry crops, as well as rice often grown in the gardens as rotation crops after sugarcane or after pánvel is removed, to allow the soil to get renewed vigour. There are also some gardens which can produce only the minor crops where meansof irrigation are insufficient to produce the superior crops noted above.

* * * * *

State of husbandry.

18. Generally, the cultivation throughout the district is carried on with care, and a good deal of labour is expended on it; but I think the western villages are more carefully cultivated. Weeds are not found there in cultivated fields to the same extent as in the eastern villages, where the state of husbandry is more slovenly and bad. The worst villages of all, with regard to husbandry, are those situated near Háveri; there I found whole fields of beautiful black soil covered with grass and bushes, and totally uncared-for. The reason given by the people is that many fields in Háveri and villages surrounding it belong to wealthy sowkars and persons living in Háveri, who do not make their livelihood depend on the produce of their fields, but who are engaged in trade, principally that of cardamoms, and they simply keep on their fields for grazing their cattle, or sub-let it to poor men who have not the means of working them thoroughly, nor the inclination to do so, as they have no permanent interest in the

land. The most perfect state of husbandry struck me as being in the beautiful fields of Ingalgi and surrounding villages; there, for miles, not a weed could be seen in the splendid black loam of the country.

Manure to what extent used.

19. Manure is generally used throughout the districts. All fields are more or less manured according to their requirements. The garden lands are fully manured, especially those growing the superior crops, which are manured with great care and as much as the cultivator can afford to do so all the year round. Rice lands are also freely manured. The dry crops get also a fair share of the manure. The black soils require somewhat less, but even with these I saw most of the fields manured before sowing operations. The red soils have always to be manured thoroughly each year, as the produce depends so much more on it in the poorer soils. I found that throughout the district the value of manure is fully appreciated by the villagers, and large cart-loads of it were continually going to the fields everywhere. In fact, I do not know of any place where manure is not used to a greater or less extent.

* * * * *

Price lists.

21. I obtained price lists showing the rates at which grain has been selling in this district, from 1840 up to the present time, from the Karajgi and Bankápur Mámlatdárs. The price lists obtained from the Karajgi Mámlatdár showing rates at which grain was sold at Karajgi and Háveri are good, and appear trustworthy; that obtained from the Bankápur Mámlatdár, said to be prepared from data obtained from the Bankápur sowkars and merchants, contains so much erroneous information and is so untrustworthy that I have not made use of it. In preparing the price list statement† I have taken the average of the rates at which grains were sold at Háveri and Karajgi as a fair exposition of the correct rates at which grains have been selling during the last 35 years. I have divided the period from 1840 to 1874 into periods showing average for each 10 years for the first 30 years, and the last five years I have averaged separately. From this it appears that in the first ten years, from 1840 to 1849, the average rate at which jowári, the staple grain of the country, was selling at, was 119 sers per rupee. For the next ten years, that is, from 1850 to 1859, jowári sold at 51 sers per rupee. For the third period of ten years jowári sold at 26 sers per rupee, and latterly for the last 5 years, from 1870 to 1874, jowári has sold at 36 sers per rupee.

* * * * *

† Appendix B to Survey Commissioner's letter. Page 50 *ante*.

23. For the present year, 1875, I have prepared a separate statement of current prices for all grains and articles of consumption sold in the principal bázárs of the district under report. This is deduced from a number of nirruks (price lists) obtained from the principal bázárs during my stay in these districts, and gives the average rate at which each of the articles mentioned were sold in the five principal bázárs of Háveri, Karajgi, Shiggaon, Hulgúr and Bankápur during the period above named.

Current prices.

* * * * *

29. There is only one good made road passing through the western villages of the district under report. This is the Hubli and Harihar made road. It is a good road in its length from Shadambi to Háveri, with the exception of a few places where it passed through black soil, and where, during the rains, it is very heavy. North of Shadambi, between that village and Tirmalkop, there are many places where it is so muddy that the cart wheels sink very deep, and form large ruts, making the road almost impassable during portions of the rainy season. These places should all be metalled, and I observed that in many places large quantities of metal have been prepared for laying down on the road near Deogeri; also where there is black soil there are many very muddy places where the road can hardly be said to be made at all. From this principal road two other made roads branch off near Bankápur, one to Hangál and the other to Mundgod, in Kánara. These two roads, however, pass through only two or three of the villages under report.

Made roads.

30. There are several projected made roads in different stages of preparation and some only lined out. These are as follows:—

Projected made roads.

1. There is one road branching off from the Hubli and Harihar made road at Gotgudi and marked out as far as Dhundshi and passing through the southern part of Mudli lands.
2. Another made road branches off at Shiggaon from the Hubli and Harihar made road, and goes to Savanúr passing through the lands of Mothali and Gúndúr. This road is partially bridged but not metalled, and is hardly more than a tracing. Traffic along this road appears to be very small and the road of no particular value except to open out the Savanúr State.
3. A small bit of road has just been sanctioned to be made from the Hubli and Harihar made road north of Bankápur to connect it with the Hángal made road passing through the lands of Munwali and Ankadkhan.

4. A new road is also marked out from Háveri to Háwanur, passing through the lands of Yetinhali, Jangamkop, Ugudi, Budgáti, Somankátti, Ipikop, Basápur and Guttal. From this road a branch road is marked out from Jangamkop to Karajgi, connecting the latter place with Háveri. This road is bridged in a few places, and should be pushed on to completion as a useful road.

5. Another made road is traced out from Karajgi to Savanúr, passing through the lands of Mantgani, Bhawitimápur, Hattimatur, Talihali and Kalalkond, but this tracing is only just begun and is imperfect, having only been marked out in a few places. It appears to me a very useless road, as no trade or traffic of any kind passes that way, and it can only be meant to open out the Savanúr States.

6. Another made road is traced out, connecting Savanúr with Lakshmeshvar and passing through the lands of Yelwági, Raolojikop and Allipur. This is quite a new tracing, only partially marked out.

7. The last tracing of a made road that I am aware of, besides those mentioned above, is one which, I am informed, was marked out some 12 years ago from Hulgur to Shiggaon; but the tracing appears only to have been made as far as Kengápur; and although boundary marks were altered in Hulgur accordingly, the cultivation is still going on as before, quite regardless of the tracing of the made road which is ploughed over. Since the tracing was made 12 years ago, nothing farther has been done to make a road as purposed.

8. Another tracing of a made road has just been ordered, I am informed, by the Karajgi Mámlatdár, to go from Háveri to Adur of the Hángal Táluka *viâ* Sangur on the Warda River; but no tracing has, I believe, been made as yet.

Roads of urgent necessity.

31. With regard to all these tracings of made roads, I beg to state that it appears to me a mistake to mark out numberless roads without making any one of them serviceable, and I think it would be much better to spend the money thus expended in making thorough good roads, where they are most urgently required; and, with reference to this, I would beg to point out that, while classing in these districts, I observed that a large traffic of cotton carts now exists where no attempt has been made to make roads, that is, from Mundargi of the Dambal Táluka to Bankápur. I am informed by the Bankápur Mámlatdár that every year as many as 2,000 and 3,000 carts laden with cotton come direct from Mundargi to

Bankápur struggling through bad country cart roads, constantly being upset and breaking down. These carts appear to come by the direct road after passing through the Kalkera Pass of the Kuppat Gudd range of hills, through the villages of Hebal, Baleh, Husur, Bhairapur, Krishnápur, Hattimatur, Talihali, Hurlikupi and thence on to Bankápur. These carts go from village to village by the best roads obtainable, but, as may be presumed, perform with great difficulty the journey from Mundargi to Bankápur. The fact that so many carts pass that way alone shows the importance and necessity for making roads as soon as possible. I believe a road is projected to pass from Dambal to Shirhatti, thence to Lakshmeshvar and through Savanúr to Bankápur, but that road will be much more circuitous than the one now taken by the cotton carts. At any rate an opening out of roads from Mundargi to Bankápur appears urgent, and hence I mention it.

Country cart roads.

32. Country cart roads are numerous all over the district, connecting every village with those around it, except in a few of the western rice villages, where the roads are not so numerous or so good. These country cart roads are, in general, fair, and quite sufficient for the little traffic which exists from village to village or to the neighbouring market.

* * * * *

Manufactures.

35. There are not many manufactures in the district under report. In the villages Hos-Riti, Hulgur, Deogeri and Karajgi a fair amount of cotton cloths are made as well as to a smaller extent in several other villages. Of these cotton looms there is a total of 834 in 50 villages out of 137 under report. "Kamblis" are also made to a small extent, principally in Hurlikupi, Chenápur and Huwinshigli; the total number of the kambli looms amounts to 212 in 32 villages. There are oil presses in only 21 villages amounting in all to 51; only a small quantity of oil is made. In the village Hire Murlihali glass bangles of different colors, such as are worn by women, are made; the glass in colored blocks is obtained from the Bellary Districts. Karajgi is somewhat celebrated for the manufacture of scented powders of sandalwood, frankincense, &c. Also in Karajgi are made stamped colored cloths, which are cotton cloths stamped in red and black stripes or checks; these are used by natives for making "razaees" or sleeping coverlets. Earthenware pots are made in several villages. In the village of Wadwi pots are made of soap stone. These soft stones are obtained in a hill of the adjoining village Hebal, and are cut with small adzes into any shape that may be wished; the blocks of stone cannot be obtained of more than one or at most two cubic feet, and

therefore the vessels or pots made of them are small. They are very cheap and are used extensively by the natives, principally by Brahmins, for cooking, &c.

* * * * *

Schools.

49. There are in all 62 schools in 48 villages. Of these 62 schools there are 2 girls' schools and 15 boys' schools, appointed by Government; the remaining 45 schools are private schools, established by the villagers themselves. The number of schools existing at the time of former settlement does not appear to have been recorded anywhere; it is therefore impossible to compare the present number of schools with the number existing formerly.

The present state of schools and the average daily attendance is shown in the following table :—

Inhabited Villages.	Government Schools.				Private Schools.		Total.	
	Boys.		Girls.		Boys.			
	No. of Schools.	Average attendance.	No. of Schools.	Average attendance.	No. of Schools.	Average attendance.	No. of Schools.	Average attendance.
133 villages	15	876	2	99	45	627	62	1,602

There is no doubt that the state of education is now far advanced on what it was thirty years ago from the simple fact of there being so many more schools, a large daily attendance and many natives found to know something of writing and reading. * * * * * * Female education seems to have been adopted only among the lower-caste Hindus, among which 17 are returned as capable of reading and writing. The detail of people capable of reading and writing is shown in the statistical table No. IV. From this it appears that education is most advanced amongst the Brahmins and afterwards the Lingayets, the Mussalmáns and low-caste Hindus being the worst off in this respect.

Liquor distilleries, temples, and talimkhanas.

50. I have obtained from the village officers statements showing forth the number of liquor distilleries, temples, and talimkhanas in the 137 villages under report, and this information is tabulated below :—

Inhabited Villages.	Liquor Distilleries.	Temples.	Talimkhanas.
133 villages	19	833	133

From this it appears that there are in the 137 villages only 19 liquor distilleries, and they exist in only 13 villages. There are 722 Hindu temples and 111 Mussalmán musjids or places of worship. The talimkhanas or "Gardi manis", as they are called in Kánarese, are places where wrestling and different exercises with dumbbells, gymnastics, throwing and lifting weights and athletic exercises of different kinds are indulged in by the villagers. There are in all 133 talimkhanas in 90 villages.

General health of the District.

51. The general health of the district is good. Cholera has not been known in most of the villages for the last ten years or more. Small-pox has generally disappeared, and the only malady which has of late visited these villages is fever. The last season has been particularly bad for fever, which has been worse, perhaps, in the eastern villages than those most to the west. This is accounted for by there being generally more rain throughout the rainy season and more particularly in the eastern villages towards the end of the rains. Speaking in a general manner of the whole district, I think I am correct in stating that fever has been bad throughout all last season even up to the hot weather, when numbers of villagers in each village were laid up with it. As a rule, however, I am informed this district is remarkably healthy, and with the exception of some localities celebrated for fever, not much sickness is to be found anywhere. Some villages, for instance Kankapur, are almost depopulated by the constant presence of fever.

Births and deaths rate.

52. A record of the births and deaths in each village is kept by the village officers. From this I have deduced birth and death rates on an average of the last four years. It appears from this record of births and deaths that the annual average rate of births is 3,001, and deaths 2,388, which on a total population of 133 inhabited villages of 88,869 souls, shows an annual increase of 3·37 per cent., and an annual decrease of 2·70 per cent., so that on an average of the last four years the population appears to be increasing yearly at the rate of 0·67 per cent.

Vaccination.

53. Vaccination has become quite an institution, and I am informed that generally the people do not object to it, and now daily they are becoming more and more convinced of its beneficial effects. Resistance or evading vaccination is not common, although some natives require to be persuaded before they allow their children to be vaccinated. It appears that on an average of the last four years in the 133 inhabited villages, the total number vaccinated each year is 1,629.

54. The people in general are well off, comfortable and living happily. Their houses are good, clothing made of good material, they look well-fed and generally strong and healthy. The implements for domestic use seem to be ample, and the general appearance of the villages leads one to believe that the people have all they want, and are contented. The agricultural implements and cattle are generally good, and I cannot remember any village which gave me the appearance of poverty, discomfort, or misery.

General condition of the people.

(True Extract.)

W. C. ANDERSON,
Survey and Settlement Commissioner, S. D.

No. 146 OF 1846.

To

S. MANSFIELD, ESQUIRE,
Acting Collector, Dhárwár.

Superintendent's Office, Dhárwár,
29th September 1846.

SIR,

I do myself the honor to submit to you, for the sanction of Government, proposals in the usual form for the re-assessment of the Bunkapoor Talook of this Collectorate, in which the Survey operations are sufficiently advanced to allow of the new settlement being introduced at next Jummabundee.

2. The talook in question, as now constituted, contains 148 villages, of which 137 are under the direct management of Government, and 11 alienated. Of the latter, seven are subject to a Joodee payment, and the remainder held entirely rent-free. In addition to the above, there are upwards of 20 Jagheer villages scattered over this talook, which nearly all belong to the small principality of Sawanoor. The proposals to be laid before you in

the sequel refer only to the 137 villages under our direct management. These are now attached to the three kutcherries of Seegaon, Kurruzgee, and Kullus, as shown in the subjoined statement and accompanying map.* The latter will also be found to elucidate many other points to be noticed hereafter:—

Report on the Survey and Assessment of the Bunkapoor Talook.
* Not printed.

Name of Mahal or old Division to which the village belongs.	Present Distribution of the Villages.			
	Under Mamlutdar of Seegaon.	Under Mahalkurree of Kurruzgee.	Under First Karkoon of Kullus.	Total.
Bunkapoor	13	...	...	13
Seegaon	18	...	...	18
Kurruzgee	46	45	...	91
Phootgaon	4	3	...	7
Kullus	...	...	8	8
Total ...	81	48	8	137

3. The constitution of the talook here shown, whether considered with reference to its external boundaries or to the internal distribution of its villages amongst the several kutcherries, could hardly be more faulty; but I shall reserve the discussion of this subject, and the remedies I have to propose in reference to it, until the question of the assessment is disposed of.

4. With the present communication are forwarded copies of reports by my Assistants, Messrs. Francis and Young, which contain a great deal of most interesting information in regard to the physical peculiarities, agriculture, and trade of the portions of the talook in which they were employed last season, and will render it unnecessary for me to enter into any detail upon these subjects.

Situation of Bunkapoor.

5. The talook of Bunkapoor is the most centrally situated of any in this Collectorate, being inclosed by the Ranee-Bednore, Kode, Hangul, and Hoobullee talooks on the east, south and west, and by the Jagheer territory intervening between it and the Nuwulgoond and Dummul talooks on the north. It is of very irregular shape, but the westerly half, forming the major part of the Seegaon Mamlutdar's charge, may be described as a basin included between the Turrus hills to the west and Sawanoor high grounds to the east, which is

drained by a large nulla falling into the river Wurda near the village of Deogerree; from which point the eastern half, forming the Kurruzgee Mahalkurree's division, occupies the valley of the Wurda and the high grounds on either side of it down to the borders of the Gootul Mahal of Rance-Bednore. From this description, however, must be exempted the eight villages of the Kullus Mahal, which formed part of the Jagheer of the late Gopal Rao Saheb Putwurdhun, and lapsed to Government at his death in 1842. These, and one or two more, are interspersed over the Jagheer territory to the north of the talook, and their positions will be learnt from the map much better than from any description.

Hooblee report quoted.

6. The surface of Bunkapoor is generally flat, though skirted by two hills and rising grounds on nearly all sides. The low lands are generally of good quality; but there is also a great deal of inferior soil, mostly in the neighbourhood of the hills which have just been mentioned. The scenery is tame, but, from the greater abundance of trees, much more pleasing than the bare plains of Nuwulgoond and Dummul. The climate, too, of Bunkapoor is superior to that of these districts, and much resembles that of the Mamlutdar's division of Hoobullee, described in the first of my assessment reports.

7. The greatest fall of rain occurs along the line of western hills, and the villages in this quarter are styled mulnad, or belonging to the region of rain, as mentioned in the 5th para of Mr. Young's report. This division is, however, of very limited extent, and contains only 17 small villages. The portion of the plain immediately adjoining the mulnad occupies the next most favourable position in respect of rain, the fall of which may be considered to become gradually less copious and more precarious as the district stretches eastward, there being no hills of sufficient elevation to condense the passing clouds into showers during the prevalence of the south-west monsoon.

Report on the Survey and Assessment of the Bunkapoor Talook.

8. The western portions of the talook, in addition to superiority of climate, enjoy also some advantages in respect of markets. The important bazaar of Doonchee in the Turrus Mahal of Hoobullee, to which a considerable part of the surplus produce of this district finds its way, is situated in this quarter; but what is of greater moment still, the chief exports of the talook are made to the port of Compta for shipment to Bombay, and there is a slight difference in the cost of transport thither in favour of the western over the eastern parts of the district. These considerations are sufficient to indicate here the assessment should be determined, making it clear that, whatever its absolute amount,

the rates for apportioning it over the talook should be highest in the mulnad or western border, and gradually fall as the villages brought under their operation are situated farther to the east.

Agriculture.

9. The agriculture of the district is very fully treated of in the accompanying reports. In that of Mr. Young will be found, also, well executed drawings of the various implements, carts, &c., used in farming operations. The ordinary husbandry may be considered good for this part of India. Manure is applied to all the land under tillage, and considerable care and skill, as will be seen from the 10th para. of Mr. Young's report, are shown in its collection and preparation. The general course of cropping for black soils is an alternation of jowarree and cotton, it being found that wheat, which is a frequent third course in Nuwulgoond and Dummul, does not generally succeed in this district.

Cotton.

10. It would appear, therefore, that the cotton crop is of even more importance here than in the two former districts; it forms by far the most important export of the talook. Mr. Francis, in his 14th para., estimates that there are 50,000 acres of land suited to the production of cotton in the eastern division of the district, and that half of these, by the two-course system of cropping already noticed, being supposed to be sown annually with this crop, the total yield at 50 lbs. of cleaned cotton per acre, which is considered a fair average, would amount to 2,050 Bombay candies, of which he supposes 1,500 or 1,600 to be exported. The capability of this part of the district I believe to be nearly equal to what is here stated; but the actual produce of cotton I imagine to be considerably within the estimate. There is some extent of waste land, and the system of two-years' cropping I apprehend not to be universal. Besides other crops occasionally taking the place of cotton in the rotation, we have to consider that jowarree is the first necessary with the cultivator, the grain being required for the support of himself and family, and the straw for his bullocks. His first care is, therefore, to provide himself with a sufficiency of these, and it is only when this is done that he can turn his attention to cotton. When the farms are very small, as is often the case in this talook, and the proportion of inferior land in the village small, more than half of the land suited for cotton I imagine to be appropriated to the production of food, and that it is only in the case of the more wealthy cultivators with considerable farms that the two-years' course of cropping can be strictly adhered to. Owing to these and other causes, I am of opinion that the breadth of land sown with cotton approaches more nearly to a third than a half of the whole suited to this crop. The cotton soils of the western division I should think

equally extensive with those of the eastern, and upon either Mr. Francis's estimate or my own, the importance of the cotton crop to the revenue is sufficiently evident and, bearing as it does so immediately on the question of the assessment, I shall have occasion to revert to the subject hereafter, but bring it forward now in the hope that the fact will ever be held in view during the consideration of my proposals. In this talook, as in Nuwulgoond and Dummul, the cotton crop forms our chief security for the realization of the assessment; and should it hereafter, from a fall of prices or other causes, become seriously curtailed, and its place remain unsupplied by other exportable products, the probable, if not inevitable, consequence would be the necessity of effecting a further reduction of the land tax.

11. Besides the ordinary dry crops, there is a more considerable extent of rice and garden cultivation in Bunkapoor than in any district yet reported on, but still not of much importance. The rice lands amount to about 1,200 acres, and are nearly confined to the Mulnad villages, noticed in a previous paragraph. The better qualities yield a second crop after the rice is reaped, and are also in low and moist situations, well adapted to the culture of the sugar-cane, which is grown on them to some extent. For further details I beg to refer you to the 19th para. of Mr. Young's report, which contains a full description of their several varieties, and the modes of culture suited to each. The garden lands, according to the former survey records, are somewhat in excess of 400 acres, and are very valuable, yielding a revenue to Government of upwards of 6,000 rupees. Their chief products are sugar-cane, plantains, betel-leaf, sooparee, and cocoanuts, of which full accounts are given in the 15th para. of Mr. Francis's and 17th of Mr. Young's reports. The gardens are mostly situated under the large tanks of Seegaon, Hawehree, Huttee Muttoor, and Kurruzgee, from which they are irrigated by means of canals, and when these fail, as they sometimes do in the hot season, from wells sunk in the saturated ground below the tanks. And I may remark that not here alone, but almost everywhere in this Collectorate, the supply of water in wells is dependent upon tanks situated on a higher level, from which the water percolates through the soil into the wells below. There are very few independent springs to be met with anywhere, which is probably owing to the vertical or highly inclined position of the clay slate and its associated strata, which are the prevailing rocks in this Collectorate, being unfavourable to the accumulation of water in subterranean reservoirs. The importance of the numerous tanks in this province becomes thus apparent, and but for them great part of it

Garden lands.

Tanks.

would be uninhabitable. The manufactures of this district are few and unimportant, being nearly confined to the production of coarse cotton and woollen fabrics for domestic consumption. They will be found noticed in detail in Mr. Francis's 16th, and Mr. Young's 22nd para.

Annagoondee dynasty.

12. I will now advert briefly to the past management of the talook. We must go back for three centuries, to the time when it formed a part of the small Hindoo kingdom of Annagoondee, to find a period of good and prosperous government. The dynasty of the Nurputtee Rajas of Annagoondee, though it lasted only during two centuries and a half, was in some respects a remarkable one, and forms one of the few periods in Indian history regarding which there is reason to regret that so few records have been preserved. The Hindoo kings of Annagoondee have left, nevertheless, enduring memorials of their wisdom and patriotism in the many noble public works undertaken for the good of their subjects, and which still secure for their memories the affectionate regards of the people of this province. The numerous fine tanks for which the Canarese Country is famed were nearly all constructed by the Annagoondee kings. The reign of the brothers, Achit-Rao, Kristna-Rao, who flourished about three centuries ago, is especially celebrated for the number and importance of its public works and excellent civil administration. Under their auspices the spacious tanks near Seegaon and the fort of Bunkapoor, both in this talook, are said to have been built, besides many fine tanks in other places; but their most remarkable works were undoubtedly the damming of the Toomboodra River, which was effected in no less than seven places, though the stream is generally over half a mile in width, by gigantic "bandaras" formed of huge gigantic blocks,

Bunds.

often many tons in weight. Five of these extraordinary constructions, unequalled, I imagine, in any other part of India, or perhaps the world, remain to the present day to attest the genius of Dumuk Moodh, the bukshee of Achit-Rao, Kristna-Rao, by whom they are said to have been planned and executed. From these stupendous "bandaras" canals are led along both sides of the river, and supply the means of irrigation to many miles of garden lands, which at this day constitute the most valuable portions of the Bellary Collectorate of the Madras Presidency and the Nizám's Territories on the north bank of the Toomboodra.

13. Another work, executed in the same reigns, and productive of even more widely-extended benefit than those already mentioned, was a revenue survey and assessment of the kingdom. This is known in these parts as the Raee Rekee Mar Survey, and it

has formed the basis of all subsequent revenue settlements, unless when superseded by ourselves. This truly national undertaking was completed, according to my informants, under the immediate superintendence of Soloo Appajee, the prime minister of Achit-Rao, Kristna-Rao, and these names are now held in all the reverence by the peasantry here that that of Mullick Umber is in the Deccan. With them, indeed, the reign of Achit-Rao, Kristna-Rao is synonymous with all that is possible of good government on earth; and not unworthy does it seem to have been of this high honour. Such prosperity, however, was not fated to be of long continuance, and within 40 years of the termination of this brilliant administration, the dynasty of Annagoondee had ceased to exist. Its destruction was effected through a combination of the Mahomedan States of the Deccan, and the last king, Ram-Rao, the son-in-law of Kristna-Rao, lost his kingdom and his life on being defeated by the confederates at the battle of Talikot, A.D. 1563. With the same event may be said to have closed the only prosperous period in the annals of the district under report of which any tradition remains.

Report on the Survey and Assessment of the Bunkapoor Talook,

14. Before adverting to the Mahomedan rule, however, it may be desirable to say something further of the Raee Rekee Mar Survey. As far as I can learn from the traditions still current regarding it, it appears to have embraced an actual measurement and classification of the land, and an assessment fixed with reference to both. The plan followed does not appear to have been everywhere the same. Generally, however, the "rukhum", or rate of assessment per mar, was uniform throughout each district, and the adjustment of this to the various qualities of soil effected by an alteration in the size of the mar. Instead of the land measure, as with us, the rate of assessment was the invariable element in the Annagoondee survey. Thus, in the Seegaon Mahal of the Bunkapoor Talook there is said to have been three sizes of the mar, all assessed at the same unvarying "rukhum", *viz.*, the first or standard mar for good land, of four koorgees (16 to 20 acres); the second for medium soil, of six koorgees; and the third for inferior land, of eight koorgees. The "rukhum" would seem to have been fixed very low, which rendered unnecessary any greater refinement in the classification of soils than is here shown.

Raee Rekee Mar.

History.

15. The district under report is stated to have enjoyed great prosperity under this liberal assessment which continued in force for some time after the fall of the Annagoondee Government. The subjugation of the country by the Beejapoor king would appear to have been imperfectly effected, for soon afterwards some of

Desaees broke out in into rebellion, and for a long time successfully defied his authority, subsisting themselves and their followers by contributions from the country, which in this way was speedily reduced to poverty, and a large portion of it thrown out of cultivation. They were at length, however, brought again under subjection by the ancestor of the present Nawab of Sawanoor, who was deputed by the Beejapoor Government to re-establish the peace of the country. The deevan of this Nawab, Ali Khan, is said to have again brought the waste into cultivation by liberal grants of cowles, and while retaining the mar in the revenue accounts, to have made some changes in the "rukhum," which was henceforth styled the "ainath". At a later period, Huttun Khan, another of the Sawanoor deevans, doubled the "ainath" on the Government land, the increase being styled "puttee", and assessed Enams to the extent of a fourth or even a half of the original "rukhum". The "ainath" and "puttee" continued to be the standard assessment for chalee land during the remainder of the period the district remained under the Nawabs of Sawanoor. The rule of the latter is considered to have been upon the whole mild, the district being generally managed by their own officers, and never farmed but to parties who had a large stake in the country and were well known.

Sawanoor Government.

During the latter half of the last century the district suffered much from the frequent invasions of the Mahrattas, and of Hyder Ali and his son Tippoo, being made the chief field for their operations, in consequence of its containing the seat of the Nawab's Government, and the important fortresses of Sawanoor and Bunkapoor. Little change, however, appears to have been made in the assessment until the district fell into the hands of Bajee-Rao's farmers in the present century, who, not contented with the "ainath" and "puttee", or double the original "rukhum" of Annagoondee, exhibited the ingenuity of rapacity in devising new cesses, such as "nugud jasthee puttee", "hurrubsanee", "ghasdana", "sadilwar puttee", &c., which quickly reduced the district to the state of exhaustion in which it passed into our hands in 1817.

Mahratta rule.

16. The foregoing slight sketch of the management of the district under report, previous to our conquest, does not pretend to strict accuracy, but may, I believe, be relied on in its leading feature, which present an instructive example of the lasting benefits of good government. The public works of the Annagoondee State continued to advantage the country after the lapse of three centuries of nearly uninterrupted disturbance and misrule. Let us hope that our own will yet exceed them in number and importance, as well as their enduring influence on the welfare of the people. A

few tanks excepted, I cannot learn that any public works were constructed in this Collectorate by Native Governments subsequent to the fall of Annagoondee. Some tanks and wells repaired, and about 25 miles of cheap and easily-formed road, are, I believe, the results of our own efforts in this direction during nearly 30 years of British rule.

British rule.

17. Our own system of revenue management has been described in my previous reports. The only peculiarity in this district requiring notice is, that, on the completion of the former survey, the results of the measurement were alone brought into practical operation, the accounts being thenceforward kept in acres instead of mars; but no change was made in the assessment. What the latter is, it is not easy to say; for everything had fallen into such confusion during the latter years of Mahratta rule, that few trustworthy village accounts could be procured when we took possession of the country. It may, however, be considered the result of an attempt to restore the old Sawanoor standard of the "ainath" and "puttee"; but, judging by the marked inequalities in the assessment of different and even contiguous villages, I am inclined to think the experiment far from successful. This assessment has been subject to frequent modifications by permanent deductions from the standard, by cowles, and by remissions at the annual settlements. It is, and has been, worse than useless as a guide for estimating the relative capabilities of the villages composing the talook.

18. I now proceed to the consideration of the revenue hitherto obtained from the district. It is not my intention to take any notice of the amount collected under former Governments, which would lead to a tedious and profitless discussion, as we have not records sufficient for the purpose, and what are to be found would throw no light whatever on the problem of what is a fitting assessment for the district under the altered circumstances of the present time. The duration of our own administration has now been sufficiently extended to enable us to decide this important inquiry without reference to what may have gone before it, and the arguments I have to advise in support of my own views will have reference to the revenue accounts of the last 28 years, which, though neither absolutely correct nor complete, are sufficiently so for our purposes, and contain the only trustworthy information we possess upon the subject.

Revenue hitherto obtained.

19. I have obtained accounts of the annual revenue settlements of all the villages of this talook for nearly the whole period of British rule. This, however, extends only to five years in the case of the villages of the Kullus Mahal, and 10 years in that of

the village of Ingulgee, the former having lapsed to Government in 1842, and the latter in 1836. I shall, therefore, leave these nine villages out of account for the present, in considering the cultivation and revenue of past years, to which I would now invite your attention. For the remaining 128 villages I have accounts for the last 28 years, and from them I have constructed the accompanying diagram, to exhibit the fluctuations in the rental and cultivation of Government land during this period. The only item complete for the whole series of years is the net rental set apart for collection at the Jummabundee, which fortunately, however, is the most important of all. The extent of land in cultivation for the first six years of the diagram is entered in the accounts in koorgees, and the equivalent of these in acres being uncertain has not been shown. The practice of entering the gross rental or kumal of the land in cultivation in the accounts commenced in 1834-35, and from that year forward only will this item be found upon the diagram, but the full kumal was not shown till 1841-42, when the permanent abatements from it on account of over-assessment were also brought to account, which explains its immense apparent increase in that year. The deficiency of our information regarding the "kumal", however, is of no moment, as it was not taken into consideration at all in determining the net rental for each year. It is further to be understood that the diagram refers only to the Government land in cultivation in each year, to the exclusion of all other items of land revenue arising from grazing farms, sheep tax, fruit trees, alienated land, &c.; the limitation here noticed being made with the view of enabling us to perceive more readily the rates of assessment hitherto paid. The items of revenue omitted in the diagram necessary to make up the full rental of the Government land, waste as well as cultivated, will be noticed hereafter. The effect of the survey settlement on the revenue derived from Joodee and Enam lands cannot be ascertained until the settlement of these tenures by the investigations of the Enam Committee; though it is to be understood that the rates of assessment to be fixed upon will be applicable to all lands whatever, and that wherever the present Joodee payments exceed the Survey assessment of the whole lands of a wuttun, the excess will be immediately relinquished.

Entries.

20. An explanation and example of the uses of the diagram are given below it, and having been already noticed in previous reports, it will suffice to mention here, that the heights of the columns of deepest shade represent the net rental on the land in cultivation, marked by dotted lines for the several years to which they refer, and both

Diagram.

measured by the scale of acres and rupees carried across the diagram. The position of the dotted line with reference to the height of the shaded column gives us the average rate of assessment per acre. Where the two coincide, the rate is exactly one rupee per acre; over one rupee when the dotted line falls within the shaded column; and less than one rupee when without.

Periods.

For the first nine years of the diagram, we observe a high average assessment, and a slowly diminishing rental and cultivation, as far as the latter can be ascertained, indicating unmistakeably that the assessment was in excess. For the next five years we have a much reduced assessment, and in this period, it will be observed, cultivation steadily advanced, and in the following year attained its maximum. The remaining 12 years, with two exceptions, both of which were followed by an increase of cultivation in the following year, exhibit a high rate of assessment, and a declining revenue and cultivation. Here are some remarkable facts. Every year of low assessment is followed by an extension and of high assessment by a contraction of cultivation. During the first nine years of our administration the assessment was high, and the revenue declining; for the next five it was low, with a tendency to improve; and for the last 12, high, with a diminishing revenue. We have here most convincing proof that, with one short interval of five years, the Bunkapoor District has been suffering from over-assessment during the whole course of our administration, and are struck with the lamentable fact that cultivation is now more limited than at any former period of our rule, instead of exhibiting the increase that might naturally have been looked for from 30 years of peace and security. The Government

Present state of cultivation.

arable land of the villages included in the diagram exceeds 122,000 acres, and cultivation has now fallen to 52,000 acres, or greatly below a half; and this in despite of the advantages enjoyed by the cultivator of late years in the abolition of transit duties and taxes, and the facilities these have afforded for the export of cotton to Bombay. A revision and reduction of assessment have become, indeed, of the first necessity, and nothing short of these, I am persuaded, could arrest the decay which has been surely, though slowly, consuming the resources of the district for many years past.

21. I do not wish it to be understood, however, that the cultivators are invariably poor. In the villages of the Mamlutdar's division, more particularly, there are many substantial cultivators possessing from 8 to 20 bullocks, and one or two of the large agricultural carts, who hold farms at rentals varying from 100 to 300 rupees. To men of this description even the present high rates are not oppressive, as their ample means enable them to keep

their lands in a high state of culture, and raise far superior crops to those obtainable from the ordinary husbandry of the district. But the great body of the cultivators are unfortunately very differently situated, and stock is so deficient in some villages as not to amount to more than one bullock to 30 acres of cultivated land.

Average assessment.

22. The average assessment of the last seven years, composing a period of uninterrupted decline, is Rs. 1-4-5 per acre. This includes, however, the rental of garden and rice land, and on making the proper deductions for these, the preceding average is reduced to Rs. 1-2-3 per acre of dry-crop land. The latter, however, must be considered to apply to the better descriptions of soil, which alone are extensively cultivated, while the waste consists in great measure of poor uplands. We may, therefore, confidently assume the latter average to be a high rate of assessment for even good land, and I say this in full recollection of the great inequality of the existing assessment, owing to which an average rate of the same amount as the present might be made less burdensome by being more fairly apportioned. Not an equalization merely, but a reduction of assessment must be made to afford any good grounds for anticipating a successful result from the new settlement. The present depressed state and gloomy prospects of the cotton trade, which contributes so largely to the revenue of this district, form also cogent reasons for a liberal reduction of assessment.

State of cotton trade.

23. The average rate of assessment for the five years ending with 1833-4, during which cultivation was steadily extending, was about 14 annas per acre for dry-crop soils.

Rates.

24. We may also be assisted in determining proper rates for this district by a reference to those adopted in the other talooks already settled, which, as far as we can judge, appear to be suitable. I consider Bunkapoor to possess a better climate than either Nuwulgoond or Dummul, and to be even slightly superior in this respect to the Mamlutdar's division of Hoobullee. The highest rates of assessment for dry-crop lands in these three districts are the following :

Talooks.	Class of Villages.	Maximum rate of assessment per acre.
		Rs. a. p.
Hoobullee	1st	2 0 0
	2nd	1 8 0
	3rd	1 4 0
Nuwulgoond	1st	1 5 0
	2nd	1 2 0
	3rd	1 0 0
Dummul	1st	1 2 0
	2nd	1 0 0

25. The climate and relative advantages of the different parts of the Bunkapoor Talook have been already described in my 7th and 8th paras. The western villages in the "mulnad" have abundant rains, and rice is there cultivated to some extent. The transition in climate from these villages to those immediately adjoining them in the plain is considerable. In the latter, the fall of rain is insufficient for the rice cultivation, and becomes still more scanty as the district stretches eastward, though not to any great extent. These circumstances, as I have already said, indicate that the rate of assessment should be highest in the western part of the district, and gradually diminish according to the position of the villages eastward.

Hoobullee.

26. The first of the districts entered in the preceding statement, whilst most nearly resembling Bunkapoor in climate, possesses considerable advantages over the latter in having an extensive market for all kinds of agricultural produce in the large commercial and manufacturing town of Hoobullee. And, in consequence of this, a lower rate of assessment would require to be adopted for parts of Bunkapoor, in order to place the two districts on an equally advantageous footing.

Plan for Bunkapoor.

27. Other circumstances which have had their weight in the formation of my opinions might be noticed, but the above will probably be considered sufficient, and I may now mention my plan for re-assessing the Bunkapoor Talook. My proposals are to have

Four classes.

four classes of villages assessed at different

Rates.

rates. The first to comprise 16 rice villages, lying along the western border, and to have a maximum rate of assessment for dry-crop land of Rs. 1-12 per acre. The rice lands in this, as well as the remaining classes, will have a distinct rate, to be noticed in the sequel. The second division will contain 55 villages, lying immediately east of the preceding class, and have a maximum rate of Rs. 1-8 per acre. The third division, of 36 villages situated still farther eastward, will have a maximum rate of Rs. 1-6; and the fourth, or most easterly division of all, comprising 31 villages, will be assessed at Rs. 1-4 per acre. These maximum rates are to be considered those of first-class soils, while the rates of inferior soils will be proportionally lowered according to their relative values, as determined by the survey classification. A list of the villages contained in each of the four classes is given in an appendix, and their relative positions will be readily ascertained from the accompanying map.* The difference in the rate of assessment for each will provide, as nearly as I can judge, for their relative advantages as to climate and markets.

* Not printed.

Average rate.

28. The assessment here proposed will yield an average rate of 13 annas for dry-crop soils, which is about five annas less than that obtained from the past collections of the last seven years, and one anna less than of the five years ending with 1833-34, when alone the district showed any symptom of improvement. The reduction here shown will not, I think, be considered excessive, when it is recollected that the average rate of past collections refers only to the land in cultivation, which is composed in great part of good soil ; and in the case of the last seven years, to a period of excessive assessment, when cultivation and revenue were both declining. The rates fixed upon are the highest I can venture to propose without risking the success of the settlement; and there is so great a probability of the prices of agricultural produce, and especially of cotton, ranging lower hereafter than they have hitherto done, that I am unable to divest myself of an apprehension that the deduction, liberal as it is, may be eventually found insufficient. The effect of the proposed assessment on the future rental of the talook will be shown when I have disposed of the remaining questions regarding the rates of assessment to be imposed on irrigated lands.

Garden lands.

29. The baghaet or garden lands of Bunkapoor are mostly irrigated from large tanks, constructed by former rulers, and kept in repair at the expense of the present Government. The objection to an extra assessment on gardens irrigated from wells, as tending to discourage the digging of new ones, does not apply to tank-gardens, which have not been brought under irrigation by private enterprise, nor would their exemption from extra assessment be likely to promote the construction of new tanks, which are too expensive works to be attempted by the villagers without assistance. New tanks, if to be constructed at all, must be so by Government, which must also bear the expense of keeping in repair those already in existence; so that nothing could be fairer than to subject land irrigated by their means to an additional assessment proportioned to its increase value. Nevertheless, good policy requires that even these gardens should be placed on a more favourable footing than dry-crop lands, with the view of rendering conspicuous the superior advantages of irrigated cultivation generally, and thus affording every encouragement to its extension by the digging of wells and construction of small tanks within the means of private enterprise.

30. The present garden assessment is generally too high, and in many instances oppressively so. There are a few gardens which cannot be cultivated at all at the existing rates, and are

in consequence lying waste. From personal inquiries made at the two chief garden villages of this district, Hawehree and Seegaon, I ascertained that the baghaet cultivators, as a class, were not in better circumstances than the farmers of dry-crop soils. Of 20 garden cultivators at Hawehree, there are only four in tolerable circumstances, the others being poor and in difficulties. The average garden rate at Hawehree, is 29 rupees per acre; but a large proportion of the irrigated land is classed as rice ground, though cultivated with the usual garden products, and the average rate of assessment for this is only seven rupees, which reduces the general average rate for the whole land watered from the tank to about 14½ rupees. At Seegaon, the most highly assessed garden is rated at 40 rupees per acre; the holder is well-nigh ruined, having been obliged to part with nearly the whole of his property to discharge this assessment, and would, he told me, have thrown up his garden before now, but for the prospect of some relief at the introduction of the survey settlement. Adjoining this garden is another assessed at 30 rupees per acre, and the holder, though not reduced to the same state of indigence as the one just mentioned, is yet poor, and only able to pay his way with difficulty. The garden rates at Seegaon vary from 40 to 10½ rupees per acre, and their average for last year was Rs. 15-6. The general average rate for the whole garden land of the district for the same period was Rs. 14-5 per acre.

Gardens.

31. The higher of the rates above shown can only be paid by gardens cultivated with cocoanut and soparee trees, or the betel creeper. These products, however, owe their superior value to the long time they take to come into bearing, *viz.*, 12 years in the case of the cocoanut, eight years in that of the soparee, and three years in that of the betel. It is quite evident, then, that the cultivation of these products requires capital to be sunk for several years before any return is yielded at all, and that when they do come into bearing, they should give to the grower a higher rate of profit than annual crops of sugar-cane or other ordinary garden products from which the return is immediate. The heavier assessment upon such gardens, however, deprives the cultivator of this higher rate of profit, which is his due, and the necessary consequence is a want of enterprise amongst the baghaet cultivators, or wish to extend the cultivation of superior products. At one time the gardens of Seegaon were full of cocoanut and soparee trees; but these were destroyed by Tippoo Sooltan's ruthless soldiery and followers when his army was encamped in the neighbourhood for the siege of Sawanoor, and have never been

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replaced. Had the baghaet assessment been moderate, these gardens would have again become stocked with the valuable trees in question during the 30 years of peace and security enjoyed by the cultivators under our rule. The Seegaon gardens are now mostly devoted to the culture of the betel.

Garden rates.

32. The objectionable plan of assessing gardens at a higher rate because stocked with valuable trees must be abandoned, and the higher profit obtainable from superior products left with the cultivators, if we wish to see a spirit of enterprise awakened in them, and the cultivation of valuable products to become more general. A large proportion of the garden land of Bunkapoor is suited to the growth of cocoanut and soparee trees, and these will, doubtless, be planted largely under a reduced and more equitable assessment. The principle upon which gardens watered from tanks should be assessed is, in my opinion, quite clear. The tanks being constructed and kept in repair at the expense of Government, Government is entitled to the enhanced rent arising from the increased fertility of the soil consequent on irrigation, but is not entitled to anything whatever over and above this, from gardens planted with a more than usually valuable produce. The assessment should be fixed on a consideration of the respective advantages of each garden as to soil, command of water and position, but without any reference whatever to existing crops, further than as these may assist us in estimating the relative capabilities of the gardens. The effect of the adoption of this principle would be, that all gardens already stocked with cocoanut, soparee and fruit trees, or the betel plant, would immediately yield their holders a greatly higher rate of profit than the remaining gardens producing sugar-cane and other annual crops, and give a direct encouragement to the planting of the superior products.

Tank-gardens rates.

33. In considering the amount of assessment to be fixed upon tank gardens, then, we should confine our attention to those producing the ordinary annual crops yielding an immediate return to the cultivator for his outlay. The most important of these crops is sugar-cane; which is succeeded by plantains, rice or vegetables, as will be found fully described in the accompanying reports. After giving the subject my most attentive consideration, I have come to the conclusion, that the most favourably-situated gardens, with the best description of soil, would not bear a higher rate of assessment than 15 rupees per acre, so as to yield the holder an adequate remuneration from the cultivation of the ordinary crops.

34. I propose, therefore, to fix 15 rupees per acre as the maximum rate of assessment for the best tank gardens, and to

lower the rates of all others from this standard, in proportion to their relative disadvantages in respect of soil, command of water and situation.

35. These rates of assessment would not be applicable to gardens wholly irrigated from wells. These are in quite a different position, as the great majority of existing wells have been dug by private enterprise, and the gardens attached to them have passed into the hands of their present holders by inheritance or purchase, whenever an excessive assessment had not wholly deprived them of value. The State would hardly seem to have a claim to any portion of the increased produce resulting from the irrigation of such gardens, which may be considered nothing more than a fair remuneration for the risk and outlay incurred in digging the wells. But as well-gardens have always been taxed at a higher rate than dry-crop lands, and there does not appear to be reason for apprehending that the imposition of a moderate extra cess would prove a discouragement to the sinking of new wells, the merely theoretical objection to this assessment will probably not be thought of sufficient importance to require the relinquishment of a source of revenue of considerable importance in the aggregate. It is evident, however, that the rate of assessment upon well-gardens ought to be very different from that of those irrigated from tanks.

36. The highest rate of assessment sanctioned for well-gardens in the districts hitherto settled is five rupees per acre, and I would propose the extension of the same maximum to those of this talook, which are very limited in number and extent, and possess no peculiar advantages which would seem to render an increase of the previously sanctioned rates desirable in their case.

37. The rates for gardens partly irrigated from tanks and partly from wells would hold an intermediate place between those already proposed to be determined with reference to the extent of the assistance obtained from the tank.

38. The present baghaet assessment yields a revenue of about 6,000 rupees, which I estimate will be reduced a third by the new settlement; but this abatement, though large, does not seem beyond what justice and good policy require.

Rice lands.

39. I have still to propose rates of assessment for the turee or rice lands which are more important than those of any district hitherto reported on. They amount to 1,200 acres or so, chiefly situated in the first class of villages along the western border of the talook and yield a revenue of between 4,000 and 5,000 rupees. The turree lands of Hawolree are assessed very high; but I have already explained that these

are in reality baghaet, and cultivated with garden crops. The average rate on the true rice lands of this district under cultivation last year was about 4¼ rupees. The assessment varies greatly, however, being occasionally as high as 10 rupees an acre, and as low as one rupee, or less. There is a good deal of rice land lying waste, owing to the assessment being too high to admit of it being brought into cultivation.

40. Rice husbandry is a laborious and unhealthy occupation, which ought to yield the cultivator a higher remuneration than the farming of dry-crop lands. The reverse of this, however, is the case, I should say, and the circumstances of the rice cultivators generally are inferior to those of their neighbours in the plain, which is chiefly owing, in my opinion, to the heavier assessment with which their lands are burthened.

41. There are two kinds of rice lands in Bunkapoor. The superior, occupying the bottoms of the little valleys running into the hills, yields a second crop (of pulse generally) after the rice is reaped. In favoured localities an occasional crop of sugar-cane is also obtained from this land. The inferior rice land is found in terraces on the sides of hills or slopes, and yields no second crop. A very full account of the products and modes of culture suited to these lands is given by Mr. Young in the 19th section of his report.

Rates.

42. In the districts hitherto settled, rice land is of very limited extent, and yields for the most part only a single crop. The rates sanctioned for it vary from three rupees to one rupee per acre. These will fairly admit of a considerable increase, in order to include the superior two-crop soils of this district. I propose that the maximum rate for the best description of rice land, admitting of an occasional rotation crop of sugar-cane, be five rupees per acre, and that the rates for less favoured descriptions should be diminished from this point down to one rupee, according to the value of the land, as in the case of those already sanctioned. This assessment would afford, in my opinion, sufficient relief to the rice cultivator, and have the effect of speedily bringing under tillage the rice lands now lying waste, without involving ultimately any important sacrifice of revenue.

General results.

43. It remains for me to notice the general results of the plan of settlement now before you, which promise not unfavourably in a financial point of view. I estimate that the survey rental of the Government land of the 137 villages composing the talook rice and garden lands included, will amount to 1,15,000 rupees. In the annexed statement will be found the total

New kumal.

revenues derived from the same lands during different periods of our administration, compared with the survey rental above noticed.

Periods.	Assessment on cultivated land according to diagram in a preceding page.	Other items, comprising grazing farms, tax on sheep and fruit trees, &c.	Revenue of Kullus villages and Ingulgee, not included in diagram.	Total revenue from Government land.	Estimated Survey rental.	Excess of Survey rental over realizations of past years.
Average of last 28 years	77,406	1,956	10,707	90,069	1,15,000	24,931
Average of five years ending 1833-34.	63,280	1,508	10,707	75,495	1,15,000	39,505
Average of last 12 years	76,188	2,158	10,707	89,053	1,15,000	25,947
Last year, 1845-46	71,820	4,988	10,131	86,939	1,15,000	28,061

44. In the preceding statement is included every item of revenue hitherto derived from Government land. The revenue of the Kullus villages and Ingulgee is taken at the average amount for the several years they have been under our management, *viz.*, five years in the case of the Kullus Mahal, and 12 years in that of Ingulgee, for the three first periods of the statement. An inspection of the last column shows the very considerable amount by which the survey rental exceeds the revenue of any period of our management. It is not to be expected that the full rental will ever be realized, but I anticipate that the revenue under the proposed settlement will eventually range from 10,000 to 20,000 rupees per annum higher than it has ever hitherto done.

Anticipations.

45. From the second column it will be observed that the grazing farms and taxes on sheep and fruit trees are to be absorbed in the new assessment. This will be done gradually by the extension of cultivation in the case of the grazing farms; but while waste fields remain, their grazing will be sold as usual. The taxes upon sheep and fruit trees are, however, intended to cease immediately. The former is two rupees for every 100 sheep, which of itself may not be heavy; but now that the wastes are all marked off into distinct fields, and the grazing of each sold separately, the shepherds cannot drive their sheep over them as formerly, but have to purchase the grazing either directly from Government, or from those to whom it may have been sold. The sheep-tax, therefore, should be considered absorbed in the higher rents now obtained by Government from waste lands. Its amount is inconsiderable, being about

Grazing farms.

400 rupees for the whole talook, which with the difficulties and vexatious scrutinies attendant on its collection, offers additional reasons for the abolition. The sale by auction of the produce of fruit trees standing on Government land is a most pernicious impost, and during its continuance it is vain to hope that any more trees will be planted. Bunkapoor is admirably adapted for the growth of mangoe, jack and other fruit trees, which will no doubt be planted extensively when the cultivators become assured, by the abolition of the farm in question, that they will be allowed to gather the fruit of their own trees, instead of seeing it sold annually to the highest bidder. This wretched tax, to which I attribute chiefly the fact of no trees being ever planted on Government land, yields only the paltry sum of 200 rupees.

Fruit-trees tax.

46. In addition to these taxes, all levies in kind by the Patels, Coolcurnees and hereditary Zemindars are to be absorbed in the new assessment. These levies are styled aya meera in this district, and are estimated at nearly 4,500 rupees by the Officers in question. This valuation I consider to be much too high; but a minute investigation into the subject will be made in introducing the new settlement, when I expect that the necessary compensation will not exceed at the utmost 3,000 rupees, which must be deducted from the amounts entered in the last column of the preceding statement, to ascertain exactly the possible net increase of the district rental under the new settlement.

Huks in kind.

47. Besides Bunkapoor I have also to solicit sanction to the introduction of the settlement in the lately lapsed village of Behuttee, which formed part of the Surinjam of the late Wamun Rao Saheb, Chief of Sonee, and is now attached to the Mamlutdar's division of the Hoobullee Talook, which, with this exception, is already settled. The survey of Behuttee was immediately proceeded with, in compliance with a request to that effect contained in your predecessor's letter to my address, dated 2nd August 1845, No. 967. The village adjoins the third class of Hoobullee and first class of Nawulgoond villages noticed in the statement appended to my 24th para., and will, of course, be subjected to the same rates of assessment.

Behuttee.

48. I have further to request the sanction of the Honorable the Governor in Council to these settlements being declared permanent for the usual term of 30 years.

Term of continuance.

49. Having now disposed of the assessment, I propose to devote a few observations to certain other matters bearing more

or less directly on the proper subject of this report, and the treatment of which is of much importance to the welfare of the talook, and the success of the plan of settlement which has now been laid before you.

Form of talook.

50. The first of these subsidiary questions which I shall take up has already been noticed in my 3rd para., and refers to the present faulty constitution of the Bunkapoor Talook, in reference to its external boundaries, as well as the allotment of its villages to the several kutcherries. There are now three kutcherries in the district, *viz.*, that of the Mamlutdar at Seegaon, of a Mahalkurree at Kurruzgee and of a first Carkoon, whose duties are the same as those of a Mahalkurree at Kullus. The last kutcherree was constituted for the management of the Kullus villages when they lapsed to Government, and was not, I believe, intended as a final arrangement, for the villages in question have not yet been brought under our regulations, and no advantage has been taken of the new station to transfer to it any other villages, though there are several most conveniently situated for that purpose.

51. It is not easy to understand why Seegaon should have been chosen for the site of the Mamlutdar's kutcherree, for it stands quite on the verge of the district, and is a most inconvenient locality for its general supervision. And one is also at a loss to discover the principles on which the division of the talook was afterwards made between the kutcherries of Seegaon and Kurruzgee. At any rate the convenience of the ryots and facilities for the despatch of business, to be secured by attaching the villages to the nearest kutcherree, were subordinate considerations; for otherwise we should not find the town of Hawebree, and villages of Heeré and Chick-Murleehullee, 18 miles distant from Seegaon, placed in the Mamlutdar's division, while they are all within six miles of the Mahalkurree's station at Kurruzgee.

Formation of talook.

52. The external configuration of the talook is, however, even more faulty than its internal arrangement; immediately west of the Mamlutdar's station the talooks of Hangul and Hubullee overlap each other and intrude into Bunkapoor in a singularly intricate manner, which no description, without the aid of a map, would be adequate to explain. And a similar strange intermixture of the Bunkapoor, Kode and Ranee-Bednore talooks occurs immediately south of the Mahalkurree's station at Kurruzgee; while a little way to the east, and in the heart of his division, we find the two villages of Konunteemba and Munnoor separated by a large interval from the rest of the Gootul Mahal, to which they now belong.

53. These anomalies are owing to the present talooks having been made up of the old native mahals or divisions of the country over which the Watans of the hereditary Desaees and Deshpandehs at one time extended; but they would doubtless have been long ago corrected had the subject been particularly noticed, or had there been maps prepared in a manner to attract attention to them. With a map such as that forwarded with this report, I do not think that any Collector would have made a talook with the present boundaries of Bunkapoor, or fixed upon a site so eccentric as Seegaon for the Mamlutdar's kutcherree.

54. A proper territorial allotment of districts is quite indispensable to secure efficient revenue and police management. When villages are inconveniently distant from the kutcherries to which they are attached, they are unavoidably neglected. The Mamlutdar or Mahalkurree will not take the trouble to visit them, and indeed could not spare the time if he would; while the villagers submit to much, rather than undertake a long journey to the kutcherree for the chance of redress. Robberies are more likely to occur in such villages, as the perpetrators are always sure of having ample time to escape before the district police authorities can arrive at the spot and take any measures for their apprehension. I might enlarge upon these evils, but need not, as they must be apparent on the most cursory consideration of the circumstances; though I may add, that the importance of having each district as compact as possible, with the kutcherree of the head revenue and police officer occupying a central position within it, can hardly be over-rated.

55. Now it so happens that Seegaon, though a most inconvenient location for a kutcherree in the present state of the talook, is yet an excellent position for the station of a Mamlutdar, with a district extending westward to the borders of the Canara Collectorate of the Madras Presidency, so as to include the portions of the Hangul and Hoobullee talooks in that quarter which are placed at an inconvenient distance from the kutcherries to which they are at present attached.

56. My proposals for the re-constitution of the Bunkapoor Talook, then, are to retain Seegaon for the Mamlutdar's station, and incorporate in his division 16 Hangul and 18 Turrus villages, lying south and west of it; to transfer to Hangul four detached Bunkapoor villages situated far to the south, and to Turrus 11 villages in the north-western corner of the present talook, which are at an inconvenient distance from the Seegaon kutcherree. I propose, further, to transfer to the Mahalkurree of Kurruzgee the three Seegaon villages of Hawehree, Heeré and Chick-Murleehullee, nine Ranee-Bednore and seven Kode villages, all within a few miles

of his kutcherree, by which changes we should give a proper line of continuous boundary to the portion of the Bunkapoor Talook south of the Warda. And lastly I would recommend that Kullus be made a Mahalkurree's station, and the transfer of 12 villages from Seegaon and four from Kurruzgee to this division. By the adoption of these arrangements a very compact form would be given to the Bunkapoor Talook, and the locations of the three existing kutcherrees rendered as favourable as could be desired, while very considerable improvements will be at the same time effected in the present charges of the Mamlutdar of Hangul, and the Mahalkurrees of Turrus, Kagnellee and Gootul, as will be made at once apparent from an inspection of the map.

Ancient Mahals.

57. It may be objected to these alterations, that they would break up the ancient mahals, by assigning portions of them to different kutcherries. To this it would be sufficient to reply, that this has already been done to a considerable extent in the recent creation of Mahalkurree's kutcherries, and no inconvenience has been found to result from the arrangement. But it may be worth while to pause for a moment, for the purpose of examining whether the conservation of the old mahals is of any real importance. The only supposition upon which, as it appears to me, they could be so is, that they constitute, through the hereditary Zumeendar, a connecting link between our village and talook establishments, upon the preservation of which our system of revenue and police administration is more or less dependent. No hypothesis could, in my humble opinion, be more completely without foundation. The economy of each village, as revenue authorities unanimously attest, is complete in itself, and in no way dependent upon other villages. A village in any mahal is not more closely connected with other villages in the same mahal than with those of a different mahal. Our subordinate revenue and police establishments are in reality but two, the talook and the village; and the ordinary relations of the latter to the former suffer no disturbance by the transfer of the village from one kutcherree to another. The village reports and collections are forwarded to one Mamlutdar instead of to another; but this is the whole extent of the change. The entire village economy remains in all respects as before. While the facts of the case are so, it would appear that a proper territorial allotment of talooks has been prevented by the notion of the village economy being somehow dependent on the old native districts, and that the breaking up of these would impair the efficiency of the village administration. No apprehension could well be more groundless. The relations of the village to the district kutcherree are direct, and the interference or interposition of the hereditary

Zumeendar is neither enjoined nor permitted. The latter, in fact, is a mere cipher, for whom in our system we can find no suitable place nor fitting duties. To forego, therefore, any one of the important advantages to be gained by a proper territorial allotment of districts to our revenue and police native officers, for the sake of preserving the old mahals, would be to sacrifice a reality for an imagination, a substantial good for a merely nominal advantage.

58. The number of villages proposed to be transferred is 81 in all. Their names, the nature of the transfer, and their distances in miles from their present and proposed kutcherries, are shown in the subjoined table, of which a copy is inserted on the face of the map, for the purpose of facilitating reference :—

Nature of Transfer.	Villages.	Distance in Miles from Present Kutcherree.	Distance in Miles from Proposed Kutcherree.
From Seegaon to Kullus.	1 Utteegerree	10½	5
	2 Seesveenhall	9½	5½
	3 Govunhal	8	6
	4 Chowndhal	8½	5½
	5 Chillur Budnee	8	6½
	6 Ulleepoor	9½	6½
	7 Rowlojee Kop ..	11	5½
	8 Yeluwugee	11½	4½
From Kurruzgee to Kullus.	1 Sunkleepoor ..	15	1½
	2 Hovin Seeglee ..	11½	4½
	3 Hesroor	10½	8
	4 Budnee	18½	9
From Turrus to Seegaon.	1 B. Bussapoor ..	6½	6
	2 S. Somapoor ..	7	5
	3 Makanoor	9	3½
	4 Gungaloor	9½	3
	5 Nareekop	11	2½
	6 Lutchmeekop	10	2½
	7 Yedlabad	9½	4½
	8 Munchinkop ..	14	5½
	9 Simuntra	8½	3½
	10 Dasunkop	10½	4½
	11 Shabanoor	11½	2
	12 Mawunkop	9½	9½
	13 Kyatun Keeree ..	7½	8
	14 Sungondunkop ..	8½	9
	15 Mulgondonkop ..	7½	8½
	16 Joudulguttee ..	8½	9½
	17 Veerapoor or Buswunkop	10½	8½
	18 Budrapoor	11½	7
From Seegaon to Turrus.	1 Beeleebal	15½	10½
	2 C. Harkoonee ..	12½	9½
	3 H. Harkoonee ..	12½	9½
	4 Boolupunkop ..	10½	8½
	5 Goorunhullee ..	10½	4½
	6 Boodeehal	9	6½
	7 Ramapoor	8½	5
	8 Hunmunhullee ..	8	4½
	9 Inculgee	8½	6½
	10 Murteekuttee ..	7½	5½
	11 Koonkoor	9½	3
From Hangul to Seegaon.	1 Urtal	16½	6½
	2 Horsoor	16½	5½
	3 Yetinhullee	16½	5½
	4 Hunmunhullee ..	17	3½
	5 Koorshidpoor ..	15	3½
	6 Hunmapoor ..	15½	5
	7 B. Konunkerree ..	12½	6½
	8 K. Konunkerree ..	12½	6½
	9 Kullusgerree	18½	4
	10 Burrumguttee ..	13½	3½
	11 Kullian	13½	3
	12 Beesunhullee ..	14½	3½
	13 Hoonshcekuttee ..	18½	3½
	14 Shabal	11½	7
	15 Kulkuttee	11½	5½
	16 Bad	13½	4
From Seegaon to Hangul.	1 Bhadumguttee ..	8½	8½
	2 Belgal	12	5½
	3 Kadshettechullee ..	18½	5½
	4 Belowtee	10½	7
From Seegaon to Kurruzgee.	1 Haweree	18½	6
	2 C. Murleehullee ..	18½	4½
	3 H. Murleehullee ..	17½	4½
From Gootul to Kurruzgee.	1 Konuntcemba ..	10½	3½
	2 Munnoor	9½	5
	3 Boodguttee	8½	3½
	4 Somunkuttee ..	7½	4½
	5 Teemunhullee ..	9½	4½
	6 Kunwullee .. .	7½	6
	7 Hunmunhullee ..	8½	5½
	8 Kengond	9½	7½
	9 Agree	10½	3½
From Kagnellee to Kurruzgee.	1 Jungunkop	9½	3½
	2 Lukmapoor	8½	5½
	3 Yetinhullee	9	4½
	4 Malapoor	10½	3½
	5 Veerapoor	8½	5½
	6 Soorunhullee ..	7	6½
	7 Seede Dewapoor ..	7½	5½
	8 Hurrumguttee ..	11½	6½

59. The following table shows the number, area and rental of the villages now and to be allotted to each of the kutcherrees which have been named, under the existing and proposed arrangements :—

Name of Taluka.	Name of Kutcherree.	Present Distribution of Villages.					Proposed Distribution of Villages.				
		Government villages.	Alienated villages.	Total.	Area in Acres of Government villages.	Rental of 1845-46.	Government villages.	Alienated villages.	Total.	Area in Acres of Government villages.	Rental of 1845-46.
						Rs.					Rs.
Bunkapoor ..	Seegaon Mamlutdar's.	84	6	90	100,283	36,420	91	7	98	81,351	63,646
	Kurruzgee Mahal ..	48	5	53	84,650	42,637	63	6	69	104,295	53,191
	Kullus Mahal	8	0	8	22,179	7,715	20	0	20	47,318	21,397
Hoobullee	Turrus Mahal ..	57	9	66	58,011	37,477	51	8	59	64,932	50,977
Hangul	Hangul Mamlutdar's.	102	31	133	118,679	69,620	90	31	121	106,074	64,003
Kode	Kagnellee Mahal ..	88	9	97	105,318	36,117	80	9	89	98,011	34,235
Ranee-Bednoor ..	Gootul Mahal	60	7	67	143,500	43,322	52	6	58	131,419	35,859

60 By making the present Kullus kutcherree a Mahalkurree's station, as proposed, some addition to the present establishment there will be indispensable. This might be effected, I think, without expense to Government, by transferring to Kullus one carkoon on 15 rupees per mensem from Seegaon, and one of 18 rupees from Hangul, as both of these districts will be considerably reduced in size by the contemplated arrangements. The requisite addition to the Kullus peons might also be obtained by transferring three on four rupees a month and four on 2½ rupees from Hangul, and one on four rupees from Seegaon. The present allowance for stationery and petty supplies at Kullus would require to be increased by two rupees, which might be met by a corresponding deduction from that of Hangul. Lastly, I would propose the transfer of one carkoon on 15 rupees a month, and two peons on four rupees, from Hangul to Turrus, as the establishment at the latter kutcherree is now rather limited, while a considerable addition to the revenue of Turrus will be occasioned by the adoption of my proposals. These transfers, with the present and contemplated strength of the establishments in carkoons and peons for the several kutcherries, are exhibited in the following statement :—

Kutcherries.	Carroons.				Peons.				
	Present strength.	Add for transfers.	Deduct transfers.	Proposed strength.	Pay per mensem.	Present strength.	Add transfers.	Deduct transfers.	Proposed strength.
					Rs.				
Seegaon	10	...	1	9	4	35	...	1	34
					2½	5	...	...	5
Kurruzgee	5	...	...	5	4	20	...	...	20
					2½	9	...	...	9
Kullus	2	2	...	4	4 3	8	4	...	12
					2 2½	...	4	...	4
Hangul	10	...	2	8	4	35	...	5	30
					2½	10	...	4	6
Turrus	4	1	...	5	4	15	2	...	17
					2½	7	..	...	7
Total ...	31	3	3	31	4	113	6	6	113
					2½	31	4	4	31

61. These few changes in the establishments and the alterations in the distribution of the villages previously explained, would be a most important reform, and conduce greatly to the efficiency of the revenue and police management of the districts affected by them. Out of the villages selected for transfer, there are thirty-one 10 miles and twelve 15 miles or more distant from the kutcherries to which they are now attached, while there will only be one of them all so distant as 10 miles, should my plan be adopted. In the Bunkapoor Talook, as proposed to be constituted, the great mass of the villages will be brought within six miles of their respective kutcherries; and, with the exception of a few outlying villages of Kullus, which no arrangement could prevent, there will not remain a single village at an inconvenient distance from any of the kutcherries.

Roads.

62. I will now submit a few observations on another subject, which is likely to have a still more important influence on the settlement, which has been laid before you. I allude to the state of the roads between this province and the coast, in connexion with its export trade in cotton.

63. In a previous para. of this and in my former assessment reports I have endeavoured to show the great importance of the cotton cultivation to the revenue of this province, which possesses no other exportable product, in so far as I am aware, which could possibly take its place, in event of the cotton trade being lost or greatly contracted. And should this unfortunate result take place, I do not know of any other source from which the land revenue could be sustained, even at the moderate standard we are

now fixing. In the 34th and following paras. of my Dumbul assessment report I expressed a fear of the prices of cotton continuing to fall: and the events of the past year have tended to confirm the gloomy anticipation. The supply of cotton from America continues to enlarge even beyond the increasing demand of the markets of Europe: and, looking to the energetic character of her population and the vast tracts of fertile soil suited to the growth of cotton yet unoccupied, we have reason to believe that this will continue to be the case for many years to come.

Cotton Trade.

64. These circumstances sufficiently account for the present precarious condition of the cotton trade of this Presidency, and enable us to foresee its extinction or great contraction at no distant date: with the disastrous consequences to the people and the revenue which this would entail, if we continue to look on with folded hands, and calmly permit events to take their course. With the export of cotton would be lost an import trade of an equivalent amount, to the detriment of the customs; while the land revenue of the interior, from the want of other exports to supply the place of cotton, could hardly fail of being greatly deteriorated. It is indeed possible that the difficulty of raising any other exportable produce may prevent the cultivation of cotton being relinquished, even when prices fall greatly below their present standard; but as this would require a corresponding fall in the prices of all other agricultural produce, the effect, as regards the welfare of the people and the revenue would be the same: and after a period of suffering to the agricultural population, Government would probably be under the necessity of submitting to a further reduction of the land assessment. On either supposition, the importance of the cotton trade to the revenues of this Presidency is equally obvious, and its present position seems to require the most energetic efforts being made for its preservation. My own conviction is that nothing short of extensive improvement in the internal communications of the country will meet the exigencies of the case, and that unless these be speedily undertaken, the revenue and trade of this Presidency will receive a shock from which they may never recover.

Roads.

65. If financial considerations prevent the improvement of the internal communications of the country, the importance of the latter, after all that has been said and written on the subject, seems, in my humble opinion, to be still imperfectly understood. These are the very considerations, as it appears to me, which most loudly call for the improvements in question. The roads already constructed, few and inadequate to the wants of the country though they be, will, I apprehend, be found to have repaid to Government the cost of their

construction tenfold. Let us endeavour to imagine what would have been the present trade of the port of Bombay had no roads been opened through the Western Ghauts and the Concan to the various ports along the coast. Its present vast trade with the interior of the Peninsula would never have been called into existence, and, as a necessary consequence, the customs duties, salt duties, and land revenue of the Deccan and Khandesh could not possibly have been what they now are. The extent of the depreciation it may be impossible to estimate; but who can doubt that it would have been very great, and that the gain to the revenue by the roads in question must have far exceeded the cost of their construction. Roads require a large outlay of money; and because they yield no direct return, we are apt to forget that they yield a return at all. They are in reality, however, the most profitable of all investments to Government, and I do not believe there is a much-wanted line of road in the country which would not, in its direct influence on the revenue, repay the cost of its construction within 10 years. Whatever may be thought of road or railway speculations in this country in the hands of private capitalists, there can surely be little doubt of their effects on the revenue of Government; and if the guarantee of a certain rate of profit be requisite to induce capitalists to venture on such undertakings, it would, in my humble opinion, be a wise policy to grant it.

Their value.

66. The line of railway projected for this Presidency by the Great Peninsula Railway Company, even if carried out, will not prove of the slightest service to this province, though it might be made to do so, and with great advantage to the scheme, in my opinion, by its southern branch being extended from Sholapoor, in a line running nearly due south, down to the banks of the Toomboodra River. There is so little probability of this extension being made, however, that the supposition may at once be dismissed; but were it otherwise, the railway would neither supersede nor render unnecessary the construction of roads to the coast. And the great length of the Southern Mahratta Country from north to south precludes the possibility of any single line sufficing to meet the wants of the province. There ought at least to be two. The more southerly for Dharwar Collectorate of this Presidency, the Canara and Bellary zillas of Madras, and a portion of Mysore, leading to the port of Compta; and the other for the Belgaum Collectorate, Jagheer States, and Nizám's Dominions, to some port north of Vingorla,—probably Viziadroog.

67. The former of these lines would have to be constructed by the Madras authorities, and I am happy to learn that there is every prospect of this being immediately done. The portion of the line

from Sirsee to our frontier is already laid out, and is now being provided with permanent bridges of masonry; while a favorable line for the descent of the Ghauts, with a slope nowhere exceeding one in eighteen, has been found in the neighbourhood of the Deveemunnee Pass. Proposals for the immediate construction of the latter, supported by the strongest recommendations of the Madras Government, are now, I understand, before the Home authorities, whose sanction to the plan is considered certain.

68. All that is wanted to render the Compta road immediately available for carts from this Collectorate as far as Sirsee is to connect it with the Dharwar and Hooblee road, by extending the latter to the Madras frontier. The importance and advantages of making the few miles of road necessary for this purpose have been long ago pointed out and admitted; the necessary plans and estimates have, I believe, been furnished; and there has been no want of Engineer Officers to proceed with the work: but, from some cause or other, year after year passes away without anything being done. From Hooblee this road would be taken to Turrus; but beyond that point I do not know the particular line fixed upon. I avail myself of this opportunity, however, to record my opinion, that it should be taken *viâ* Doonchee, which is the most important mart in this Collectorate south of Hooblee, and thence through our territory as far south as Bomunhullee, where it would be within four or five miles of the Madras road. By taking this line there would be easy access to the road for carts from all parts of the zilla; whereas if the road be taken direct from Turrus to Moondegode in the Canara Collectorate, the important mart of Doonchee and all our southern talooks would be completely cut off from it by an intervening tract of dense jungle, impassable for carts; and a moiety of the advantages to this Collectorate obtainable from the opening of the line be sacrificed for the sake of saving the construction of a few additional miles of road. The line I have recommended is, I believe, that chosen by Captain Graham when Executive Engineer here; and as of the utmost importance to the welfare of this Collectorate and the success of the Survey settlements, I would strongly advocate its immediate construction.

69. The northern line, from the coast to the interior, would fall entirely within the limits of this Presidency; and were its importance to the trade of Bombay, the customs and salt revenues, and the land-tax of this province adequately appreciated, I feel certain that no obstacles whatever would be permitted to prevent, or even to delay, its execution.

70. There remains little to add before bringing my remarks to a conclusion. The survey of Bunkapoor has been effected in almost exact accordance

Fields,.

with the previous holdings of the cultivators, which in most respects must be considered a highly desirable result. It has, however, added greatly to the number of the fields, and owing to their frequently small size and irregular shape, still more to the number of the field boundary marks, as well as to the difficulties and expense connected with their construction. These are points, however, which need not be enlarged on here, as they will be more appropriately considered in my annual progress report of the survey operations.

71. Mr. Young, in the 21st section of his report, has made some interesting remarks on the condition of the Bunkapoor villages. The picture he draws of them is eminently unfavourable, but, in my opinion, calculated to convey an exaggerated impression of the state of filth and neglect which he considers to be characteristic of them all. The villages, it must be allowed, are no models of neatness and purity; but in the last of these respects certainly would not suffer by a comparison with those of many parts of civilized Europe. In the towns and villages of Italy and Germany the senses of sight and smell will be more offended than in those of this country, and I believe the latter to have the advantage in point of neatness and cleanliness over many villages in the remoter parts of Ireland and Scotland. The practice reprobated by Mr. Young, of burying in cultivated fields, is probably more the result of necessity than of indifference; for wherever places are set apart for the interment of the dead we find the graves usually distinguished by some simple memorial. His suggestions, however, for setting apart plots of ground for the purposes of sepulture in villages without graveyards, at present seem worthy of adoption. The "Golgotha" of scattered bones and carcasses of dead animals around the dwellings of the Mhars and other low castes, which he notices with horror, I imagine to be more offensive to the eye than injurious to health, as the numerous dogs, jackals and vultures, ever on the watch for such carrion, speedily clear away whatever may be left by the Mhars themselves.

Villages.

72. Mr. Young is of opinion that the condition of the cultivators would be improved by having their dwellings in the vicinity of their fields, instead of being collected into villages as at present, which he ascribes to the former insecure and unsettled state of the country having compelled them for self-defence to remain together. I am inclined to dissent from these conclusions. It is not so much for mutual security as for mutual assistance that the agricultural population is collected into villages. They are thus enabled to provide themselves with water by digging wells or tanks; with

artificers for the construction and repair of their implements of husbandry; with places of worship, and numerous comforts and conveniences, which would be quite beyond the reach of isolated farmers located upon their fields. The location of the farmer upon his land can only be advantageous when his means are sufficiently ample to make him independent of assistance from his neighbours; and, accordingly, in most countries where the agriculturists are poor and the farms small, as in this, we find them collected into villages for the purpose of supplying themselves with necessaries and comforts beyond the reach of each individually, but easily obtainable by their combined exertions.

73. Mr. Young concludes his elaborate report with a sketch of the geology of Bunkapoor, in which some interesting questions are mooted; but as foreign to the subject of this letter, and in anticipation of finding a more fitting future opportunity for the consideration of the subject, I refrain from offering any remarks upon his observations in this place.

74. In conclusion I would respectfully solicit the Honorable the Governor in Council to accord an early sanction to the proposals contained in this report, to enable me to proceed with the detailed calculations of the assessment, which must be completed before the new settlement can be carried into effect.

I have, &c.,

(Signed) G. WINGATE,

Superintendent, Revenue Survey and Assessment,

Southern Mahratta Country.

List of Villages referred to in the 27th para. of report, forming the First Class, and intended to have a maximum rate of assessment of Rs. 1-12 per acre for dry-crop soils:—

No.	Names of Villages.	No.	Names of Villages.	No.	Names of Villages.
1	Mook-Busreekuttee	6	Mudlee.	11	Heere-Beindegerree.
2	Neergoondee.	7	Kamunhullee.	12	Hunmunhullee.
3	Jenkinkuttee.	8	Beesateekop.	13	Belowtee.
4	Belud-Busreckuttee.	9	Shadumbee.	14	Belgal.
5	Bhadumguttee.	10	Gotguddee.	15	Kadsheteehullee.

List of Villages referred to in the 27th para. of report, forming the Second Class, and intended to have a maximum rate of assessment of Rs. 1-8 per acre for dry-crop soils:—

No.	Names of Villages.	No.	Names of Villages.	No.	Names of Villages.
1	Unkud Khan.	20	Karudgee.	39	Chilleehal.
2	Kotgerree.	21	Hoolgoor.	40	Snoor.
3	Chennapoor.	22	Buswunhal.	41	Mahoor.
4	Narayunapoor.	23	Paneeguttee.	42	Tegechullee.
5	Moonowlee.	24	Boolupunkop.	43	Heere-Nulloor.
6	Hotoor.	25	Goorunhullee.	44	Chick-Nulloor.
7	Kajapoor.	26	Belwulkop.	45	Neerulgee.
8	Jaleekuttee.	27	Mutteekuttee.	46	Mothullee.
9	Seegaon.	28	Ramapoor.	47	Heere-Mulloor.
10	Wunhullee.	29	Kyalkond.	48	Kunkunwad.
11	Gunjnguttee.	30	Kengapoor.	49	Hawerce.
12	Bunnoor.	31	Muntrowlee.	50	Goondoor.
13	Moogullee.	32	Gopgodunkop.	51	Ingulgee.
14	Chick-Mulloor.	33	Hoorleekoopee.	52	Boodeehal.
15	Chakapoor.	34	Coorbur Mulloor.	53	Deogerree.
16	H. Munkuttee.	35	Kulmudew.	54	Somapoor.
17	Beluglee.	36	Mungee.	55	Ulludkuttee.
18	Chick-Beindegerree.	37	Koon-Mulleehullee.		
19	Nagnoor.	38	Burdoor.		

List of Villages referred to in the 27th para. of report, forming the Third Class, and intended to have a maximum rate of assessment of Rs. 1-6 per acre for dry-crop soils:—

No.	Names of Villages.	No.	Names of Villages.	No.	Names of Villages.
1	Uttegerree.	13	Seerbudgee.	25	Totud Yellapoor.
2	Seesveenhal.	14	Bovinhullee.	26	Kulkotee.
3	Govunhal.	15	Kudkol.	27	Neerulgee.
4	Chowndhall.	16	Huttee Muttoor.	28	Heere-Mugdoor.
5	Terudkop.	17	Jellapoor.	29	Chick-Mugdoor.
6	Heere-Harkoonee.	18	Kullulkond.	30	Urleehullee.
7	Chick-Harkoonee.	19	Tullcehullee.	31	Bhavee Teemapoor.
8	Beeleebal.	20	Kulsoor.	32	Yellapoor.
9	Chilloor Budnee.	21	Hoshullee.	33	Kolloor.
10	Yelluweegee.	22	Mutgunnee.	34	Kurruzgee.
11	Rowlojeckop.	23	Kullechal.	35	Gunjoor.
12	Ulleepoor.	24	Ramapoor.	36	Urrubgond.

List of Villages referred to in the 27th para. of report, forming the Fourth Class, and intended to have a maximum rate of assessment of Rs 1-4 per acre for dry-crop soils:—

No.	Names of Villages.	No.	Names of Villages.	No.	Names of Villages.
1	Heere-Murleehullee.	12	Seermapoor.	23	Budnee.
2	Chick-Murleehullee.	13	Yelgueh.	24	Kullus.
3	Hovin-Seeglee.	14	Matsapoor.	25	Soorungee.
4	Kristnapoor.	15	Nuve-Reetee.	26	Kochgerree.
5	Hesroor.	16	Chennoor.	27	Wurvee.
6	Eetsul Yellapoor	17	Kordoor.	28	Beejoor.
7	Gowdapoor.	18	Eenchgee.	29	Kunkapoor.
8	Buswunkuttee.	19	Beirapoor.	30	Kondeekop.
9	Joone-Reetee.	20	Kittoor.	31	Koneeekop.
10	Purrapoor.	21	Melmurree.		
11	Ugsunmuttee.	22	Sunkeepoor.		

(Signed) G. WINGATE,
Superintendent, Revenue Survey and Assessment,
Southern Mahratta Country.

To

G. WINGATE, ESQUIRE,
Superintendent, Revenue Survey and Assessment,
Southern Mahratta Country.

Dharwar, 18*th June* 1846.

SIR,

I have the honour to forward my report on the trade, agriculture, &c., of that part of the Bunkapoor Talook in which I have been employed the greater part of this season.

2. The villages of the Kullus division of the talook were allotted to me for classification at the commencement of the season; but, owing to some delay in the completion of their measurement, the papers of them have not been made over to me. I have not, consequently, had occasion to visit that part of the talook on duty; and not having had an opportunity of doing so otherwise, I am unable to furnish information on the condition, &c., of the villages included in that (the Kullus) division. Those in which I have been chiefly employed are comprised in the Kurruzgee Mahal, with the exception of one or two in that of Bunkapoor.

3. It will not be necessary to mention every village to which my inquiries have been extended, for as many of them are similarly circumstanced in regard to crops, seasons, &c., the doing so would lead to much needless repetition; I shall, therefore, in speaking of

the agriculture, course of cropping, &c., allude to the entire division generally, and afterwards particularize the villages having bazaars, those in which any trade is carried on, or having any other circumstance connected with them worthy of mention.

4. To describe the tract of country included in the Kurruzgee division is rather difficult, owing to its irregular shape in some parts ; but taking a general view of it, it may be said to be composed of three distinct parts, comprising a range of high land on its northern and one on its southern boundary, with an intermediate valley running parallel to the hills on each side of it from east to west. It is through the bottom of this valley that the river Wurda flows, its course being indicated by a number of villages placed closely together along both sides of its banks. The river affords an abundant and never-failing supply of water ; thus the inhabitants of the villages situated on its banks are far more favourably circumstanced than those residing in villages dependent on a tank, or other uncertain source for this necessary article ; for in seasons in which the fall of rain is deficient, the latter are often put to great inconvenience to procure even a requisite supply of it, as has been the case in many villages this year.

5. But there is also a disadvantage attending the villages on the immediate banks of the river, for, in seasons when the fall of rain is heavy, the river rises to a great height, overflows its banks and submerges the adjoining country. Several of the villages are so injudiciously placed, being on low instead of elevated spots, that in cases when the flooding occurs, the waters reach the very walls of the houses, and in the course of a few years it seems probable that Neerulgee and one or two other villages will be washed away entirely. The Neerulgee people are in fear of such a calamity befalling them, and have petitioned to build afresh on a new site. The cultivators, too, look upon the flooding as a great disadvantage to their fields, stating that the manure they have laid down, and also part of the soil, are carried away on the waters receding, and thus the land is left in an impoverished and unproductive state.

6. The cultivators reckon on some 15 or 20 different falls of rain during the season, for each of which they have a particular name and also a stated time for its occurring. Of these it seems the heavy rains are those which usually fall in June or July in the early part of the season, and in September or October in the latter part of it ; those occurring in the intermediate period being generally light showers. In April or May some heavy showers usually fall, sufficient to moisten the soil, so that the tilling and preparing the fields for sowing can be commenced. It does not appear from inquiry that there are any villages to be particularized as having generally a much larger fall of rain than others ; and

the absence of any range of what can be termed hills, either within or immediately bordering on the district, precludes the fixing on any particular situation as much more favourable than another ; the villages on the western boundary may, however, be said to be rather better situated than the others, owing to their being nearer the Ghauts and the jungle ; but the entire division is not more than 12 or 15 miles in breadth from west to east in a straight line, and therefore but little variation in the fall of rain in the extreme villages on each side is to be expected; especially so, as those to the west are not in the immediate neighbourhood of the Ghauts, but some distance from them.

7. In two or three villages there is some garden cultivation watered from tanks, to which I shall allude afterwards ; but excepting this, the entire division is under dry-land cultivation. The principal products are jowarree and cotton. In the red soils jowarree, nachnee, sawee and the oil plant, &c., are grown ; but the black soils are entirely given up to the cultivation of jowarree and cotton which are sown alternately. The early jowarree is the only kind grown, and the time for sowing it in all soils is in July, after the first heavy fall of rain, and it is ready for cutting in December. Cotton is planted in August or September, and is ready for picking in the latter end of February and beginning of March. Wheat is seldom or ever sown now, it having been seen, from repeated attempts to cultivate it, that there is something either in the soil or the climate prejudicial to its growth. The young plant it is said shoots up vigorously and flourishes until the time the grain begins to form, but then either from the influence of the west wind, or something in the soil, a blight attacks the ear, the plant is affected by it, and a premature ripeness, with an imperfectly-formed grain, if any (which is not always the case,) is the result. Gram is cultivated occasionally in some villages, but it is by no means a general crop.

8. The accounts given me of the mode of culture in black soils are rather conflicting. In one or two villages it was said to be the custom to plough all the lands regularly every year with a six or eight bullock plough, in order to exterminate the nut grass, which would otherwise spring up and prove prejudicial to the crop; in others, to plough those only to be sown with cotton, and never those to be sown with jowarree ; and, again, in others to plough only on occasions of cultivating afresh a field which has lain waste for some time. It seems, after all, that there is no regular practice in this respect, ploughing depending more on the means and condition of the ryot than on any other circumstance. All, however, admit that it is of great benefit in the case of a field to be sown with cotton, but in that of one

with jowarree it is sometimes prejudicial, for if the fall of rain be heavy, the soil runs together and becomes too wet for the proper growth of the young plant; and this does not occur in the case of a field to which the koontee alone has been applied.

9. To red soils a greater degree of tillage is required. A field should always undergo two ploughings, one length and the other crossways; but this soil when moist becomes light and friable; it is therefore easily worked, and as two bullocks only are required to draw the plough, the labour and the expense attending the culture of it are not much more than that in black soils. Independent of ploughing, it is always necessary to use the koontee once or twice to all kinds of soils before sowing, and the crops, both jowarree and cotton, in the early stages of their growth, must be frequently hoed and kept clean: the latter requires a more careful tillage than the former, for if grass and weeds be not constantly eradicated, the young plant becomes stunted in its growth, and the crop eventually turns out defective.

10. The custom of manuring is adopted generally throughout all the villages of the district—in the case of fields distant from the village equally with those adjoining it. Black soil lands are manured once in three or four years, but red more frequently every other year, and in some cases every year. In some villages I have seen mud taken out from the bottom of tanks applied as manure, but it is said that it is not half so efficacious as the manure in common use—that produced in the village and in the cultivator's yard.

11. It is by no means uncommon to hear the method of culture adopted in this country spoken of as a rude, unscientific and unproductive. Rude it may certainly be termed, in the full sense of the word, when taken with reference to the nature of the implements in general use for agricultural purposes; but unscientific and unproductive I would not so readily concede it to be. At the same time I would not be understood to say it can be termed scientific—that is to say, as embracing a system of great agricultural skill; but, taken with reference to the effect it has in bringing forth the productive powers of the soil, I am inclined to think favourably of it; and I would here instance a case of the failure in an attempt to introduce a new system of culture, as bearing out the view I take of the subject. In the first season of the experimental cultivation of the New Orleans cotton in Koosgul, in this zilla, the American plough was applied to some fields, whilst others adjoining were cultivated on the native plan; and on the crops arriving at maturity there was nothing in the appearance or the yield, either of the field to which the American plough has

been applied, different from that cultivated under the native plan. In fact, after even one year's experience in the use of this plough, Mr. Mercer, I believe, gave it as his opinion, that the natives here were well acquainted with the cultivation of the cotton plant, and that little or no benefit could be derived from the introduction of a different system of culture. This remark, I am of opinion, applies equally to jowarree.

12. But admitting the mode of culture to be good, I am doubtful whether the course of cropping can be equally so. In black soils, for instance, jowarree and cotton are sown alternately: thus a field has but one year's relaxation before it is called upon again to produce the same crop, and that frequently, too, without having had manure laid down to renovate it. This must be a most exhausting process for the soil, and, under such a course of cropping for several years, a field must, I should conceive, unless manure is applied more frequently than is now the custom, become unproductive, owing to the want of those particular properties in the soil which have year after year been extracted from it by the so frequent growth of the same crops.

13. The merchants and Bunneeahs residing in the large and bazaar towns of Kurruzgee, Hawchree, Sawanoor and others, are the chief purchasers of the jowarree grown in this district. It is bought up by them from the ryots, seldom for exportation, but generally for the supply of the retail trade. For cotton a much greater demand exists, and the means of disposing of it are consequently more numerous. The Compta sowkars send agents to Hawchree and the other large towns, or commission the sowkars residing there to purchase it for them; and, besides, there are in the above-mentioned places a great number of merchants or dealers who buy it from the ryots for exportation to Compta on their own account.

14. I have endeavoured by enquiry to make out what quantity of the entire crop of cotton grown in this district is consumed in the home manufactures of cloth, and what consequently exported. It is not easy, however, to arrive at an estimate of this with great accuracy, owing to the difficulty in learning the quantity required for the supply of the many small manufactories there are, for in nearly every village some little manufacture is carried on, such as that of dhotras. It may, I think, be assumed, that the quantity paid by the growers in the shape of wages to women for picking the crop, which I estimate at the fifth of the whole produce, is entirely expended in the home manufactures, and some further portion of that remaining to the cultivators, is also kept by them for home use—some say a twentieth part of it, others a tenth,

suppose we take the mean, a fifteenth; this, added to the fifth paid as above mentioned for picking, will give about one-fourth of the entire crop for home expenditure, and three-fourths for exportation. At a rough guess, I estimate the quantity of land in this division adopted for the growth of cotton at 50,000 acres, and by the two-course system of cropping here adopted, half of this, or 25,000 acres (supposing all to be under cultivation,) are yearly sown with cotton. Fifty pounds per acre of clean cotton I have heard stated is a fair average crop. According to this calculation the entire district will produce in round numbers about 2,050 Bombay candies, of 20 maunds to the candy, between 1,500 and 1,600 of which are exported from the district. There may very likely be some discrepancy in the statement here given, for it is not easy to arrive at a true estimate by a system of rough calculation such as that adopted in this case.

15. The crops grown in the irrigated lands in Hawehree and Hullee-Muttoor consist of two kinds, those produced by annual and by perennial plants and trees. Of the former, sugarcane is the principal and most important one, and it is grown in the same land every other year, the intermediate crop being of rice or of different kinds of vegetables. The latter consists of sooparee and cocoa-nut trees, and the plant of the creeper species producing the leaf eaten in common by the natives. These last mentioned are most valuable crops, but the expense attending the production of them is very considerable, for to the cost of labour and manure, &c., must be added the amount of rent paid yearly for that number of years in which the trees in their young state yield no return. Thus, in the case of sooparee trees, eight or ten years must elapse from the time of planting before any gathering of fruit takes place; for cocoa-nut trees 10 or 12 years are required; and the pan yields but little until the third season after planting. The produce is disposed of in the bazaars of the district, and in those of the adjoining talooks. It is not in any case exported from the zilla.

16. In very many of the villages, as I have before mentioned, a manufacture of cloths for dhotras is carried on; the quantity made is in most cases small, merely sufficient for the wants of the villagers themselves. In Kurruzgee, Reetee and Dewagerry, however, a larger supply of these than the home market carries off is manufactured, and the surplus is exported to the villages in the Belgaum Zilla. Cloths for turbans, too, are manufactured in these villages, some of which are also exported. It is a very common plan amongst the cultivators here to furnish their own thread to the weavers, paying them for the labour only of the manufacture of the cloth they may wish to have made; and in this manner

a much better description of cloth, in accordance with the taste of the party, is frequently manufactured. The Kurruzgee people make numerous kinds of cloth according to order, amongst them a strong white kadee, well adapted for covering tents.

17. In Kurruzgee, Hawehree, Reetee and Dewagerry a bazaar is regularly held once a week; the two first mentioned are of some importance in consequence of the wholesale trade in grain, ghool, &c., carried on in them; the two last are merely noticeable as places of retail trade, resorted to by the inhabitants of the surrounding villages for their supply of grain, &c. The Sawanoor and Wun Seeglee bazaars, in the Sawanoor Nawab's districts, are much frequented by the ryots residing in the villages to the north of this division, and they afford a ready market to the Huttee-Muttoor cultivators for the sale of ghool and other garden produce.

18. A considerable and important trade is carried on in Hawehree in the purchasing of cardamoms, and superintending the cleaning and preparing them for market, by parties sent there as agents by the sowkars of Homnabad in the Nizam's territories. The cardamoms imported here are principally grown in the Canara District, and are procurable in large quantities in the towns of Sirsee, Bilgy and Siddapoor, from whence the above parties bring them on bullocks to Hawehree. The seed is imported in the pod in the same state as when gathered from the plant; and in order to remove the dirt adhering to the outside of the pod and give it a clear white appearance, it is submitted to a process of washing and cleaning, and afterwards drying in the sun, before it is exposed for sale. The expense attending this process is considerable, amounting, it is said, to six rupees a gonee, nearly all of which sum is paid as the cost of labour attending this washing and cleaning, and after this the cutting off the part of the stalk left on the pod at the time of gathering. When this has been gone through, the seed is ready for market, and, being carefully packed in bags, is loaded on bullocks and despatched to Homnabad.

19. The quantity of cardamoms passing in this manner through the hands of the parties resident in Hawehree is estimated at 300 gonees or bullock-loads yearly; which, at the valuation given me of 240 rupees for each load, amounts to the sum of 72,000 rupees annually expended in this traffic. The Hawehree sowkars themselves are the purchasers of 5,000 rupees' worth, or 20 bullock-loads, included in the quantity above mentioned, which they export on their own account; and the remainder is bought up and exported by the agents of the Homnabad sowkars. The cleaning and preparing the seed for market in the manner mentioned above, which is all carried on in Hawehree, affords employment to a con-

siderable number of people—about 1,500 rupees being annually expended in the shape of labour. A further trade of some account is carried on in sooparee imported from the Canara District, and sent also to Homnabad. Some 3,000 or 4,000 rupees' worth are said to be annually exported from Hawehree. The sooparee grown in Canara is greatly superior to that produced here, which accounts for its export to so great a distance as Homnabad.

20. Of tanks and other public works the district is nearly barren, for, with the exception of the tank at Hawehree and the one at Huttee-Muttoor, there is nothing worthy of mention. The advantage which Government derives from the supply of water which these two reservoirs affords is not inconsiderable, for by means of it the garden cultivation in the above villages is alone kept up. Well known, as it long has been, how much a supply of water applied for irrigation enhances the value of land, and the consequent revenue derivable from it, it is extraordinary that we see so few works by means of which it is made available for that purpose; and still more extraordinary is it when we add that the few now to be met with are not the works of our Government, but stand forth the proud monuments of the wisdom of a former rule.

I have, &c.,

(Signed) J. T. FRANCIS, Lieutenant,
Assistant Superintendent, Revenue Survey and Assessment,
Southern Mahratta Country

No. 2 of 1846.

From

MR. D. YOUNG,
Assistant Superintendent, Revenue Survey S. M. C.;

To

CAPTAIN G. WINGATE,
Superintendent, Revenue Survey and Assessment,
Southern Mahratta Country.

Hoobullee, 29th June 1846.

SIR,

I have the honour, in accordance with your letter of the 7th April, No. 52, requesting a report on the agriculture, trade, &c., of the portion of the Bunkapoor Talooka in which my operations for the present season have been carried on, to submit the following remarks on the subjects you have specified, as given in detail in the 7th para. of your letter of the 4th October 1845, No. 66

2. That para. requires that, in visiting the different villages, I should "collect information as to their condition; the nature of the seasons and crops sown; the times of sowing and harvest; the modes of husbandry and rotations of crops; the use of manure or otherwise; the value of land as affected by distance from villages; what crops are exported, and whither, and by whom; the chief markets in the vicinity; the nature of the manufactures of the district, and whether for export or internal consumption," &c. &c.

3. Such a report, given with all the detail and fulness of which the subjects are capable, would lead to very great prolixity, and it shall therefore be my endeavour, while giving as fully as necessary the information required, to condense the whole within as little space as possible.

4. To effect this it will be sufficient in my remarks on the various crops, and their modes of culture, to enter minutely into the mode of operations for one crop of a series cultivated nearly or wholly in the same manner.

5. Passing over, for the present, the first subject alluded to in the above extract, with which I would rather conclude this report, I come to—

First, "The nature of the seasons, and crops sown."

The seasons differ materially in several parts of the district, but the two following divisions may be considered sufficient for all practical purposes:—

(*a*) That tract lying on the border of the hill jungle to the west and south-west, and adjoining the north-eastern parts of the talooka of Hungul, is the most subject to frequent and heavy rains, therefore most favourable to the growth of rice and other crops which thrive best only in a red soil, and must, to their succeeding at all, have abundance of moisture. This tract of country (as also I believe all lying to the west and south of it, extending to the Ghauts) is by the natives called the Muladu—an evident derivative from the Canarese word "mule", rain, and signifying the region of rain,—this part of the country being more than the rest pre-eminently deserving of the name.

(*b*) The other season is that of the plain, in which the rain being much less than in that just mentioned, rice is seldom or never cultivated, with the exception of an occasional field or two in a whole village, and sugarcane only as a garden crop. A line drawn from Ramapoor in the north-west, and passing through Heere-Bhendigerry, Beesateekop, Seegaon, Bad, and Belwuttee, would form a good boundary to what may be called the plain in the

north and east, and to the hilly and rainy rice-growing district of the west. Of course this is only meant to apply to that portion of the tálooka in which my establishment has been classifying, and reaches only as far east as to Mundargee Sawanoor and Uttigerry. The early season (or moongaree) in the plain commences about the end of May, and continues till the beginning of August, in the middle of which month, with the rains of the constellation Mughe, the late (or hingaree) season begins. In the Muladee the early season commences about a fortnight sooner than in the country to the east of it

The crops sown are those in the accompanying table, which shows in the first two columns the English and scientific names of the crops; in the third, the season; in the fourth, the soil in which each succeeds best, and in which it is almost invariable sown; in the fifth, the rain in which it is sown; and in the sixth, the total number of months it is in the ground.

6. To clear away any doubts as to the meaning of the particular rains in which crops are sown, I may here mention that the ryots always speak of their seasons as beginning or ending with such or such a rain. There are 27 in number throughout the year, and may more properly be called asterisms, as they are called by the names of those during which they fall.

Names of the Lunar Asterisms by whose Rains the Ryots arrange their Tilling and Sowing Operations.

	Number.	Names of the Rains or Lunar Asterisms.	Dates on which they commence.	Duration.
	1	Ushweenee... ...	11 April ...	14 days.
	2	Bhurunee	25 „ ...	14 „
	3	Kruttceke	9 May ...	15 „
	4	Rohcenee	23 „ ...	13 „
	5	Mrugashoershee ...	5 June ...	15 „
Early (or moon-garee) season.	6	Ardee	20 „ ...	14 „
	7	Poonurwusoo ...	4 July ...	14 „
	8	Pooshyee	18 „ ...	14 „
	9	Ashleshu	1 August ...	14 „
	10	Mughe	15 „ ...	13 „
	11	Hoobbe	28 „ ...	14 „
Late (or hin-garee) season ...	12	Oottura	11 September.	14 „
	13	Hustu	25 „ ...	13 „
	14	Chette	8 October ...	14 „
	15	Swatee	22 „ ...	13 „
	16	Veeshakhe	4 November...	13 „
	17	Unooradhee ...	17 „ ...	13 „
General harvest ...	18	Jeshthee	30 „ ...	13 „
	19	Moolu	13 December...	14 „
	20	Poorwashadha ...	27 „ ...	13 „
	21	Ootturashadha ...	9 January ...	13 „
	22	Shruwunu	22 „ ...	13 „
	23	Dhuneeshte ...	4 February ...	13 „
Cotton-picking season ...	24	Shututare	17 „ ...	13 „
	25	Poorwabhadre ...	2 March ...	14 „
	26	Ootturabhadre ...	16 „ ...	12 „
	27	Rewutee	28 „ ...	13 „
				365 days.

List of Dry Crops, with the times of Sowing and Harvest, in the western portion of the Bunkapoor Talooka.

Numbers.	Names of Crops.		Season.	Soil.	In what Rain sown.	Average number of months to mature.
	Canarese.	English and Scientific.				
1	Huttee ...	Cotton	Late	Black or brown... ...	10th and 11th...	5 to 6.
2	Jolu	The Great Millet. Holcus sorghum.	Early and late.	Any	5th to 12th ...	3 to 4.
3	Godee ...	Wheat	Late	Black or brown ..	12th and 13th...	3.
4	Chejee ...	Holcus spicatus... ..	Early and late..	Red, brown or alluvium	8 to 12th ...	3 or 4.
5	Bhuttee ...	Rice	Early	Any	3rd,4th and 5th.	5.
6	Nuwunee ...	Panicum italicum ..	Early and late.	Do.	9th to 12th ...	3½.
7	Save	Panicum fumentaceum (or miliaceum.)	Ditto.	Do.	4th,5th and 6th. 11th and 12th.	3.
8	Ragee ..	Cynosurus coracanus ..	Ditto.	Do.	Ditto ...	3.
9	Burugoo ...	A variety of Panicum italicum.	Early	White or alluvium ...	4th and 5th ...	3.
10	Togaree ...	Pigeon pea. Cytitus cajan.	Do.	Any	7th and 8th ...	5.
11	Kudle ...	Gram. Cicer arietinum.	Late	Black or brown... ...	12th,1 th & 14th	3½.
12	Hoorooloe ...	Gram. Glycine tomentosa.	Early	Any	6th to 9th ..	4.
13	Uwaree ...	A Bean. Phaseolus radiatus.	Early and late.	Do.	7th, 8th and 9th.	4.
14	Ooddoo ...	Phaseolus mungo ..	Early	Do.	4th and 5th ...	3.
15	Hesaroo ...	A variety of Phaseolus radiatus.	Do.	Do.	6th to 9th	4.
16	Mudukoe ...	Phaseolus aconitifolius.	Do.	Do.	Ditto ...	4.
17	Ulsundee ...	Dolichos catiang ..	Do.	Do.	Ditto ...	4.
18	Ujeewanu ..	Bishop's weed. Sison ammi.	Late	Black or brown... ...	10th and 11th...	6.
19	Subuske ...	Anise seed. Impinella anisum.	Do.	Any	Ditto ...	6.
20	Sasuve ...	Mustard seed. Sinapis dichotoma.	Early	Red	4th and 5th ...	3.
21	Avejee ...	Coriander. Coriandrum sativum.	Do.	Any	6th, 7th and 8th.	3.
22	Mensinkaee...	Chilli. Capsicum frutescens.	Do.	Any	6th, 7th and 8th till 10th.	3 or 4.
23	Tumbakoo ...	Tobacco	Late	Do.	10th and 11th...	4.
24	Budnekaee..	The Brinjal or Egg plant. Colanum melongena.	Early	White or alluvium ..	5th	4.
25	Owdla ...	The Castor Oil plant. Palma Christi.	Early and late.	Any	4th to 11th ...	4.
26	Ugushe ...	The Lin plant. Linum usitatissimum.	Ditto.	Do.	4th and 5th and 12th, 13th and 14th.	3.
27	Konsheebee...	Safflower. Carthamus tinctorius.	Late	Any but red	13th and 14th...	4.
28	Goorelloo ...	A black variety the next	Do.	Ditto	10th and 11th...	3½ or 4
29	Elloo ...	Sesamum orientale ...	Early	Ditto	4th and 5th ...	3.
30	Poondee ...	Hemp. Hibiscus cannabinus.	Do.	Any	6th, 7th and 8th.	4.

List showing the Produce of the Gardens, with the times of sowing and harvest, in the western portion of the Bunkapoor Talooka :—

I.—Fruit Trees.

Numbers	Canarese Names.	English and Scientific Names.
1	Mavingidu	Mango ... Mangifera indica.
2	Hulusingidu	Jack-fruit ... Artocarpus integrifolia.
3	Tengingidu	Cocoa-nut ... Cocos nucifera.
4	Udukeegidu	Betel-nut ... Areca catechu.
5	Balegidu...	Plantain ... Musa sapientum.
6	Perlegidu	Guava ... ... Psidium pyreferum.
7	Neombegidu	Lime ... ... Citrus acida.
8	Doddeelegidu	A kind of Citron Citrus decumana.
9	Kunchingidu	Ditto ... Citrus aurantium.

II.—Vegetables.

Numbers.	Names.		Season.	Soil.	In what rain sown.	Average number months to mature.
	Canarese.	English and Scientific.				
1	Elle bulli ..	The Betel Creeper .	Perennial ..	Garden.. ..	.. .. ..	8.
2	Kubboo ..	Sugarcane	Annual ..	.. ..	.. ....	11.
3	Gujuri	Carrot. Daucus carota.	Late	Garden.. ..	10th and 11th	3½ or 4.
4	Heere Kaee ..	Cucumis acutangulus .	Early	Any but red ..	4th, 5th and 6th ..	2.
5	Genusoo ..	The Sweet Potato. Convolvulus batatas.	Late	Ditto ..	10th and 11th	2½ or 3.
6	Bende	Hibiscus esculentus ...	Late or early ..	Ditto ..	10th and 11th or 4th, 5th and 6th.	2½ or 3.
7	Mullungi ..	A large kind of Radish. Raphanus sativus.	Early	Ditto ..	4th, 5th and 6th ..	2.
8	Belluli	Garlic. Allium sativum.	Early or late ..	Ditto ..	4th, 5th and 6th, or 10th and 11th.	3.
9	Oolegudde ..	Onion	Early	Ditto ..	4th, 5th and 6th ..	4.
10	Chuvulikai ..	Dolichos faboeformis ..	Ditto	Ditto ..	Ditto	2½ or 3.
11	Hagulkai ..	Momordica charantia ..	Early or late ..	Ditto ..	4th, 5th and 6th, and 10th and 11th.	3.
12	Sowtekai ..	Cucumber	Ditto ..	Ditto ..	Ditto.	2½ or 3.

8. Second. "The times of sowing and harvest; the modes of husbandry."

As I shall have occasion hereafter, when on the subject of "crops", to speak more at large on the latter clause, and as the "times of sowing", and the period each crop takes to mature, is given in detail in the preceding table, I shall proceed to the next subject, *viz.*—

9. Third. "The rotations of crops."

It is only after long and searching questioning and cross-questioning and personal observations in the fields, that one is

able to come to any satisfactory opinion on this head. In black soil the ryots invariably say that jolu succeeds cotton, and *vice versâ;* and in red soils, that after jolu comes ragee, or elloo, or save, &c., and that jolu again succeeds these. This, however, is sufficient to show that in their operations they follow a systematic course of cropping, and their plan is nearly similar to that followed in Europe. Rotations here, as there, may be said to consist chiefly in alternating grain with green crops, or grain crops with those yielding oil. The latter come in frequently as a relief to the usual rotation of grain and green crops, but the same crop is seldom sown in the same land for two successive years. Grain crops, however, may be sown in the same field for several years successively, but in such cases a late crop succeeds an early one. Thus, the early jolus may be succeeded by the late nuwunee, or wheat, &c. Green and oil crops may also be cultivated for several years in succession; for instance, gram, goorelloo, &c., may come after cotton, koosheebee, and so on. These are all late crops, and an interval of a whole year consequently intervenes betwixt each, during which the soil has the benefit not only of the succeeding hot season, in which it rests, but also of the early rains, and, to receive these, is previously turned up to whatever extent its condition may require. In good black soil, if an average fair supply of rain has fallen to ensure sufficient moisture after the monsoon, a second crop is obtained in the year. In the plain, however, to obtain this the early crop must be elloo (white sesamum); this is reaped in the end of August, when the soil is thoroughly ploughed or otherwise turned up, and wheat, gram, &c., with an occasional row (one in seven) of koosheebee, or ugushe with owdla, are sown. After such, the next crop is generally one of the early jolus, for which the soil is manured. From these facts the rotations may be summarily said to consist in, 1st, an alternation of grain with green crops or oil plants; 2nd, of oil plants with green crops; and, 3rd, of early with late crops.

10. Fourth. "The use of manures or otherwise."

It appears to be universally the custom in the Bunkapoor Talooka to manure the fields as often as the ryots have the means. In black and good brown soils this is only done once in three or four years, but in the red, the poorer browns, and in rice lands, manure has to be applied every second year, and in some cases, if the cultivator can afford it, every year. There are several methods of improving the soil by this means in this district, the chief of which is a mixed manure. This is collected in a pit in the compound or yard of, or near to, the ryot's house, in which stubble, ashes, the droppings of cattle, urine, and every description of rubbish is thrown, and allowed to increase till required. This is occasional-

ly covered by a thin layer of earth or sweepings of the yard, by which means the volatile qualities of the manure are fixed in the substances, and their escape by evaporation prevented. It is interesting to notice the knowledge exhibited by the ryots (all uneducated as they are) in these simple operations. They have discovered what many in our own country seem yet to have to learn, that one of the best ways to retain the enriching properties of manure is to collect it in a pit, and not in a heap. The cause they are unable to tell, but immediately understand on its being explained. By the use of pits not only is the requisite coolness ensured to prevent evaporation, but the waste of the saline matters, &c., in the manure is also prevented from being washed out, as is the case when it is kept in heaps. They appear also properly to appreciate the urine of the cattle, which is collected by ducts and thrown into the pit, and thus not only furthers the fermentation and decay of the vegetable matter by its nitrogen, but by its saline properties supplies the manure with part of its chief richness.

Another method of manuring is by having the stubble, the leaves of the cotton plants, weeds, &c., eaten off by sheep or goats, the urine and droppings of which enrich the land, and by this means the grasses, leaves, &c., are returned to the field which produced them, but infinitely more calculated to benefit it than if they had permitted to decay as they were in the soil.

A third way is to collect the stubble in heaps, and burn it on the field, the ashes of which return part of the inorganic matter to the soil extracted from it by the crop previously reaped. This, however, is only done when the finer-grained crops, as save, elloo, &c., are about to be sown.

The only other method of directly benefiting the soil, which I have been able to discover, is by one kind of green manuring. Goorelloo (a black variety of sesamum) is sown about the end of May, or in the beginning of June, and allowed to grow for three months, when it begins to flower. It is then ploughed in, and destroyed by a kind of scarifier called a koonte, and this is considered sufficient manure for two years. Alluvial lands are not manured, as, from the supplies of organic and other matter they derive from the overflowing of nalas and rivers, they are supplied by nature with those fertilising substances which in other soils require to be supplied by man. Waste lands also on coming under cultivation are not manured the first year or two, and the first crop sown is almost invariably jolu, followed, as before shown, by a green or oil seed rotation, when, should it require it, it is manured for that of the third year.

11. Fifth. "The value of land how affected by distance from village."

On this subject the ryots differ so widely, and in many cases appear to understand it so little, that I have not been able to come to any decided conclusion as to their opinion regarding it. Immediately that they discover, or fancy that they discover, that the value of the field would probably be estimated lower by making out distance from village a great evil, they exert themselves to the utmost to prove it so, but from their first replies it does not appear to be considered as making any very material difference whether a field be near to, or distant from, the village. This may be a consequence of most of the villages being small, so that their most distant fields are comparatively near; but in the larger villages, such as Seegaum, Yeluwugee, Karudugee, &c., the general answer was, that within half a kos fields required no deduction; that beyond that distance and within a kos, about two or three annas in the rupee should be deducted; and beyond that, four or five annas, or about a fourth of the whole value of the field.

12. Sixth. "What crops are exported, and whither, and by whom."

All the produce of the district may be said to be partly exported. For those most extensively grown, such as cotton, jolu, rice, nuwunee, the betel-leaf, &c., &c., merchants come from all the surrounding large towns, and from as far distant as Sirsee and Belgaum: merchants also in some of the large towns of the district buy up a portion of the produce, and export it on their own account, but by far the greater portion is sold at the village to others, or at the weekly bazaars in the neighbourhood. The amount of cotton retained for internal consumption does not appear, from the inquiries I have made, to be above one-fifth of the whole produce in larger towns, and even much less than that in the purely agricultural villages. The quantity of grain exported is also very great, but it is impossible to say with any approach to correctness how much; and as the question would be one more of curiosity than of practical utility, it appears useless to hazard an opinion regarding it.

13. Seventh. "The chief markets in the vicinity."

Outside the portion of the district to which my inquiries have been confined, are Hoobly, Misreekote, Tadus, Dhoondshee, Bomunhullee, Hangul, Alloor, Adoor, Nurregul, Dewagerry, Haverry, Sawunoor, Luksmeshwur, Sowshee and Koondgol. Those in the district are Heere Bhendigerry, Seegaum, Bunkapoor and Hoolgoor.

14. Before reporting on the little trade there is in the district, I think it better here to finish with the agriculture, and shall now proceed to specify the several crops more in detail, together with the modes of culture and of conducting harvest; of the chief implements in use among the ryots, &c., and the last first, as a previous

description of them will render the methods of cultivation more easy subsequently to be understood.

15. "Implements, &c."

The chief implements used in agriculture are [A] the neguloo; [B] the rentee; [C] the koontee; [D] the bulle-sal-koontee; [E] the yede koontee; [F] the korudoo; [G] the kooreegee; [H] the cotton-planting kooreegee. I have given sketches of most of these in the accompanying leaf, which, from my want of ability, though they can claim no merit as drawings, will yet give a more clear idea of the various articles than the following description of their uses could of themselves convey.

[A.] The neguloo is a large kind of plough, which from its great weight is used to turn up the land when very stiff, or full of weeds. It is of exactly the same make as the smaller plough, called

[B.] The rentee (No. 1.) This is an extremely rude instrument, both as to make and use. It has no mould board, and the only piece of iron about it is a narrow bar (*a*) about nine inches in length, which (for want of a better) serves the purposes of a coulter. The reins for guiding the bullocks (one pair) come to the handle, so that this plough requires but one man to use it. The larger one, however, requires six or eight bullocks (in traces,) and extra men to drive them. But in cases where the grasses, called by the natives nut and kurkee, have spread to any extent, ploughing is not sufficient to clear the soil of them, and they require therefore to be dug up, so that the long, strong and tortuous roots may be perfectly loosened and brought to the surface. Such digging costs four pies for every square mar (about eight feet square) in black soil, and six, seven and sometimes eight pies in red soils, which, from their harder material, are more difficult to work. This expense, however, is seldom incurred more than once in a cultivated field, as, after being dug up, the roots are gathered and burned, and the subsequent treatment the soil receives for its various crops prevents them easily springing up again. Kurkee is not considered so bad as nut, but whenever it has much spread, it requires to be similarly dug up, and fields under cultivation if infested with it require the plough every year. Red and brown soils always are ploughed before being sown, but good black only once after several years' cropping.

[C.] The koontee (No. 2). This may be called a kind of scarifier or cultivator, and is always drawn by four bullocks. For all soils (except rice lands when an after crop is to be sown) it follows the plough when that instrument is used. Its purposes are to cut the large clods and roots of the weeds, and to level the ridges thrown up by the plough. In good black soil, where the

latter is seldom brought into use, this implement is the first one employed to turn up the surface earth, which it does for only three or four inches. To add weight to it, a couple of boys generally sit upon the beam, on each side of the handle, and are ready to clear it of obstructing stones, stubble, &c. The only part iron is the blade (*b*) in front, the rest being wholly of wood. There is a larger kind of this same implement drawn by six or eight bullocks, and called the magee koonte, but it is only used when the soils are more than ordinarily stiff, or when grasses and weeds have accumulated in them.

[D.] The bulle-sal koonte is only a small kind of the foregoing, and drawn by two bullocks. It always succeeds the koonte, and is used for levelling the surface, or covering the seed when sown by the kooreegee. It is used in all soils.

[E.] The yedee koonte (No. 10) may be called a bullock hoe, and is usually double, as shown in the sketch, and drawn by two bullocks. It may, however, be treble, and is sometimes quadruple, each separate hoe being guided by one man. Each block has two hoes of iron (*c*), which is drawn between the rows, the stalks of the young crops being kept between them in the opening (*d*). Instead of this, another instrument is used for weeding in the southern villages; it is called——, but being only a very small description of koonte, it does not require any particular notice.

[F.] The korudoo (No. 11). This, as the name implies, is part of the trunk of a tree. The trunk is split down the middle, scooped out and smoothed outside, and two wooden pins fixed through it, on which the drag ropes and yoke may be tied. The driver standing upon the korudoo guides the two bullocks over the field. Its use is to break clods, and smooth the surface, in red or rice lands.

[G.] The kooreegee (No. 3) is a grain drill machine for sowing most of the crops. The one of which I have given a sketch is that generally used in the plain for those of the early season. The late crops, wheat, gram, &c., are sown by a similar machine, but much heavier, and therefore suitable for the soil at a period when there is less rain to soften it. This represents one for sowing four rows at once, which is accomplished, as will be seen by the sketch, by means of four conductors or pipes, each with an equidistant foot or coulter, armed, as in the case of the plough, with a bar of iron to make the drills. Under these the seed is dropped through the bamboo conductors, which are fed through a bowl-shaped head. It is drawn by one pair of bullocks, yoked in the same manner as for the rentee, koontee, &c., and guided and supplied with seed by one man. In the southern vil-

lages the kooreegee has only three conductors, but they are wider apart than those in that just described. The cause of this is not very clear, but the general reason given is, that there more grass and weeds spring up, and have to be destroyed by a stronger instrument than that used for weeding in the northern parts.—*See* [E.]

[H.] The cotton-planting koreegee (No. 4) is something on the same plan as the preceding, but is simply a block of wood, with two feet from the kooreegee placed about a cubit apart. It is drawn by a pair of bullocks, yoked as above, and guided by the driver. After this are dragged by ropes two hollow bamboos, called bookku, which are kept in the furrows drilled by the coulters, by two sowers, who, with a supply tied in front of them, drop the seed through them, as shown in the sketch. This instrument is only used for planting cotton, but the plan of the pipe is adopted, dragged after the kooreegee, for sowing the occasional rows which are mixed with other grains. In such cases, should the ryot wish an extra row to be sown distinctly, he plugs up one of the conductors in the bowl of the kooreegee, and the bookku follows in its drill instead; but if this be not cared for, it is sown in the fourth furrow along with the other grain, when a mixed row is produced.

16. Carts.—Of these there are several varieties, but those for agricultural purposes are of two kinds.

First.—The largest which is used for bringing home the produce of the fields, or for exporting it to other places. This is a huge unwieldy machine, and, unloaded, is of itself a hard pull for a yoke of bullocks. The body of the cart is about twelve feet in length, and three and a half or four in breadth. The former consists, as will be seen from the sketch (No. 1), of two long beams, and the latter merely of cross spokes at intervals along their length, and uniting them. The wheels are of one piece each, but sometimes of two or three joined together, with a ponderous tire of iron fully two inches thick, and nearly if not quite as much broad. The axletree being considerably below the height of the bullocks, the body of the cart is raised by a tongue resting on the axle. By this means, if the load be well balanced on the cart, the bullocks have comparatively little of the weight, and the draught, being on a level with their shoulders, is more easy. With outriggers on both sides, this conveyance can, though clumsily, carry a very great weight. It is drawn when loaded by at least four yoke of bullocks, and often by as many as five or six.

Second.—The manure cart (No. 2). This is drawn by four or six bullocks, in make is much the same as the above, but the sides are high, and spokes of the dry stalks of the pulse, togaree,

&c., or bamboo matting, and the bottom of boards covered with jolu straw. This is sometimes used for other purposes by removing the sides. Of these two descriptions of carts there are several other varieties, all smaller, but the chukudee or spoke-wheeled cart is nowhere in use in this district. The solid wheels, I am informed, cost from 100 rupees to as high as 120 rupees a pair, and of this the tires of iron about 45 rupees or 50 rupees each. From all appearance the ryots have yet to learn the advantage of high wheels, and, in fact, of cartage generally, their present system being neither fitted for speed, nor, I should think, at all economical, when either the price of the carts, the number of bullocks required for them, or the frequent breakings down which take place, are taken into account.

17. "Methods of culture."

First.—Cotton is grown only in black or good brown soil, and in rotation generally succeeds jolu. The cause of this may be partly that the latter crop, having been manured and well weeded, has rendered the soil suitable for cotton; or, it may be, that this crop, being only cultivable in the above soils, succeeds best after an early crop, it being itself sown in the late season. But the principal reason must be, that the one crop requires much of those kinds of food of which the other requires little or none, and that those kinds required for the succeeding crop have time to increase or improve during the year in which the first is growing, and in the intervening cold and hot seasons. Soils, if stiff or infested with the grasses nut or kurkee, require to be first ploughed across and across, after which the koontee (Diagram, No. 2) is used to cut the clods, roots, &c. This is followed by a smaller description of the same instrument, called a bulle-sal-koontee, to level the surface, after which sowing commences, but not till the rains mughe or hobbee (the end of August and first half of September). The seeds are mixed in fine manure, and sown by means of the drill plough and bookku (Diagram, No. 4), followed closely by the bulle-sal-koontee again to cover in the seed. This implement is then followed by a couple of bullocks yoked to branches of a tree, and walked over the field, by which means a clean and smooth surface is given to the soil, and this finishes the sowing operations. Next, in about a month after, follow those of weeding, when the plants have attained some little height above the surface, and is performed by an instrument called the yedee koontee (Diagram, No. 10) as often as the state of the crop requires. In the event of strong weeds springing up, or when the crop is too high to permit of the yedee koontee being used, coolies are employed to weed by the hand with an instrument called the kooreegee (Diagram, No. 3). It is gathered from the

middle of January till the end of March or beginning of April. Besides the cotton it yields, its seeds provide food for cattle, its leaves for sheep and goats, and the dry stalks serve as firewood. Of this plant there is now sown, besides the native kind, the newly-introduced New Orleans cotton, of which, however, as both the Government and yourself are more intimately acquainted than I am, I need not make any particular mention.

Second. Jolu.—Of this crop I have met with no less than 18 varieties, only two of which are late crops. It would be impossible with that degree of brevity such a report as the present should possess to go into detail on each of these; I shall therefore only give the Canarese names, which are as follows:—

1. Moortingulu	All these are sown as regular crops, but never as occasional rows among others, except the seventh, which may be sown either way. They all mature in from three to four months.
2. Dhod-jolu	
3. Ootul-phoolgara	
4. Chejkara	
5. Kagee-jolu	
6. Nundeehall	
7. Bhuguwunt phoolgara ...	
8. Putunsalee	All these, except the last, may be sown as regular crops, but they are usually sown as occasional rows with nuwunee, ragee, &c. The 12th succeeds with the latter so well in this way that it has received the distinctive name of ukkudee-jolu—"ukkudee" meaning an occasional row in a field. When sown with late crops they are only intended to supply the cattle with green fodder when all the other crops are ripe.
9. Gowreekooloo or Kulmudu-mugu.	
10. Buswunpadu	
11. Phoolgara	
12. Jelkunjolu or Jogeejedee-jolu.	
13. Kenjolu (red)...	
14. Kodmookunjolu	
15. Halmookunjolu	These two kinds are mixed with some of the above, and sown. They may be eaten roasted, &c., but bread is never made from them.
16. Oolukunjolu	
17. Beele-jolu	These two kinds are late, and the finest among the whole.
18. Kure goonee-jolu	

They have occasional rows of koosheebee, gram or ugushe sown with them, but the early kinds, of course, when so mixed, have the early pulse crops, such as toguree, hooroolee, mudukee, &c., which latter have the soil prepared for them as it is for the crops with which they are mixed. In good black soil, free from noxious weeds, the land for the jolus is treated in the same way as for cotton. This may be said to be the same with save, ragee, and nuwunee, &c., in black soils, and which are also mixed with occasional rows of pulse or oil-seed crops. Red soils, however, must always be ploughed before the levelling instrument is used.

Third.—Mensinkaee and budnekaee, when not sown in a garden, are first sown in a small plot of ground and well watered, and in six weeks or two months are transplanted to the field, and each plant placed widely apart. The earth is heaped up in ridges along the rows, to keep the roots cool, but they get no water again. When sown in this manner they are early crops, but late in gardens. The first is frequently mixed as an occasional row with the early irrigated belloollee and oollegudde; the second is always sown alone; but a late crop, as wheat, gram, &c., may be obtained from the same field after it is gathered.

Fourth.—Ragee requires some particular notice, inasmuch as its cultivation differs considerably in black and red soils. In the latter, when the ground has been sufficiently ploughed with the neguloo (or large plough,) broken and levelled, manure is laid down in heaps, at equal distances, and the seed thoroughly mixed in it, in the proportion of about two seers to a cart-load, which is sufficient for an acre. Then follows the rentee (or small plough) to form the furrows, after which the sower, with a basket full of the mixed manure and seed, comes and lays it down by the hand, he being kept supplied by another man going to and from the heap. This operation is followed by the korudoo (Diagram, No. 11) which breaks the clods and covers the seed, after which the bulle-sal-koontee is employed to level, and is again followed by the korudoo. Nuwunee also is sometimes sown in this way, with an ukkudee of hooroolee sown by the bookku, and in the proportion of one row in three of nuwunee. Ragee, however, when sown in this manner, never has an occasional row, but "ukkudee jolu" may be mixed in the heap, and sown along with it.

Fifth.—Togaree, hessuroo, mudukee, hooroolee, ulusundee, ooddoo, uwuree, avejee and chejee are the usual crops sown as extra rows: the first four are never sown separately, but the remainder occasionally are, especially the last, which indeed is more sown as a regular crop than in this way.

Sixth.—Sashvee, ujuwan and subuske are very little cultivated; the first is sometimes mixed with ragee and early save, in the proportion of half a seer to eight seers of these in four acres, and the other two are thinly scattered here and there among cotton, and are only grown for domestic use.

Seventh.—Wheat and gram are late crops, for which the soil requires being thoroughly broken up by the large plough, and then (as for the other black soil crops) this is followed successively by the koonte and bulle-sal-koonte, and afterwards sown by a heavy kind of kooreegee and followed again by the bulle-sal-koonte as usual. After this, these crops require no weeding or other care,

and in three or three and half months they are ready for harvest, and are plucked up by the roots.

Eighth. There are six kinds of oil-seed crops, viz.:

1. Owdla.
2. Koosheebee.
3. Ugushe.
4. Elloo.
5. Goorello.
6. Poondee.

For the first, the soil must always be ploughed, after which it is sown by the bookku, and the earth heaped about its roots as in the case of mensinkaee. It is frequently sown alone, but is also mixed as an extra row with nuwunee, ragee, elloo and save. Its oil (castor oil) is used both for medicine and for burning, but is not expressed in a mill like the others. The seeds are first roasted, and then broken in a large mortar with a pestle, after which they are thrown into a pot of boiling water, and well stirred and boiled for some time; cold water is then thrown in to separate the oil effectually, which rises to the surface, and is gradually skimmed off. The others are sown by the kooreegee, or, if as extra rows, by the bookku, and treated as other crops as regards weeding, &c. The second and third, when sown as regular crops, have no rows of any other kind, but are very frequently sown as occasional rows with wheat, gram or any other late crop, except cotton. The fourth is never sown as a row with other crops, but has generally sown with it rows of owdla, ooddoo or hooroolee. It requires a finer soil, and the plough is therefore never used for it; and in rotation, when it succeeds jolu, the stubble must all be gathered and burnt, so that the soil may be perfectly clean.

The fifth is always sown alone; but the last, poondee, is sown only in occasional rows with the early jolus, and is gathered about the same time with them. It is a kind of hemp. Ropes are made from the bark of the plant, and its leaves are eaten by the natives as a vegetable.

With the exception of the first, all the seeds of these plants are mixed, and their oil expressed in the same mills. The oil is both used with the people's food and also for burning. The pressed seeds make up part of the food of the cattle, and the dry plants make tolerable firewood, as do also those of toguree, &c. Maize is also grown, but in such small quantity that I have not included it at all among the crops in the list.

Having thus briefly spoken on the dry-crops of the district, I now come to the garden cultivation, which being almost entirely confined to four or five villages, and the varieties of produce being comparatively few, may be very shortly described. Irrigation is generally carried on by the water of the tanks, which is supplied to each garden in its turn, and usually once in eight days. But

in cases where this supply fails, recourse is had to wells, into which water from the tank percolates long after the surface of the latter is quite dry. This was the case last season in Seegaum (as, indeed, in almost every other place), where the garden wells are only large holes or pits from 15 to 50 feet wide, but without being built up, or any kind of labour bestowed on them, excepting a rude frame of poles and branches erected on which to fix the wheel, and in which the water may be received from the leathern bags. These, as I have said, are only used when water fails in the tanks; otherwise the latter is the reservoir from which the gardens receive their supply of water.

The chief produce of the gardens is elebulle, or the piper betel leaf, which is perennial. This is planted by cuttings, and being a creeper, long thin trees called chowgucheegidu, haleewalgidu, and nugeegidu, are set close beside it. These trees shoot up extremely quickly, and betel clings to them, but yields no leaves for two years. It requires manure three or four times during the year, and must, to succeed well, be watered every eighth day, and during the first year still oftener; it then yields a crop every third month: 1,000 creepers yield a bullock-load or "her" every three months, the average price of which throughout the year may be stated at six rupees. An acre will contain upwards of 2,000 creepers, which every third month, yielding two "hers", will in the year amount to nearly 50 rupees produce per acre. The expense, however, for planting, manuring and irrigating, is heavy; and when we consider that there is no return during the first two years for all the expense and labour bestowed on this crop, its apparent value as above estimated becomes greatly less. Leaves are gathered four, five, six and sometimes for seven years, when the trees die and are dug up, the leaves of the trees to which they clung affording vegetable manure for young plantains, &c., and their wood serving for fuel. The betel leaves are exported largely to the surrounding towns, from which dealers come to purchase, and from as far as Belgaum, &c. After this crop the garden is deeply dug all over, and according to some it lies fallow for a whole year, and is then planted with sugar-cane; after which it enjoys another year of fallow, when the betel creeper is again planted, or instead of it plantains. According to others, sugar-cane is planted immediately after the ground has been cleared of the betel and its accompanying trees, and has been well dug up, ploughed and levelled, and that one year of fallow then succeeds, to be followed by plantains or betel leaf, or, before these, by a crop of mensinkaee, or a dry-crop.

These differences probably depend on the condition of the land, or the ability of the ryot to afford fallows to his gardens.

There are differences in the modes of husbandry, not only in respect to irrigated, but also to dry-cropping; but the chief causes of these appear to be the difference either in the soil or climate, and partly the custom of the district, just as among our own farmers differences in the modes of culture exist in many adjoining counties.

Sugar-cane.—This I have classed among irrigated crops, as it is generally produced in gardens, though not so in the western parts of the district. There are many varieties of it, of which I have been able to find eight; these are—

1. The Mauritius.
2. Goobee Rustalee
3. Ram Rustalee.
4. Kure Kubboo.
5. Dodigya.
6. Byatal Dodigya.
7. Beele Kubboo.
8. Hoolloo Gubboo

Of these, the last, though the smallest, is considered the finest. The method of cultivating it, either in a garden or in the field, is much the same; in the latter case it is planted in a paddy-field from which rice has been reaped in November. The land then must possess sufficient moisture to ensure the success of the cane and is ploughed three or four times across and across; to this follows the korudoo to break the clods, after which the koonte and bulle-sal-koonte are used to pulverize and level the field. Manure is then laid down in heaps; and furrows, at about a cubit interval, are made by the large plough. In these furrows the cane is laid and covered with manure; a small plough then runs along by the side of the rows and fills them with earth. It is then well-watered once which suffices till the monsoon supplies it with the regular rains. In eight or ten days, when the surface is dry, the korudoo is used to level it and break the clods, when the small plough is again brought into use to heap the earth upon the cane, and is again succeeded by the korudoo. After a few days the surface is loosened by the bulle-sal-koonte, which permits the young cane to shoot more readily, and destroys any weeds which may have taken root. This is all that is done till the first showers of the monsoon, when the crop has sprung a few inches above the soil. The yedee koonte is then used to weed it, as in the case of other dry crops. It is now (and frequently before this) hedged in, and weeded as often as required, at first as above, and at a more advanced season by the kooreegee. The earth is heaped about the roots, and the crop is ready for cutting in 11 months from the time of sowing. A considerable portion of the cane is exported to places where sugar is manufactured (as Hangul, &c.), but as there are none such in this portion of the district, it is either sold in the bazaars, or its juice manufactured into gool—a coarse black kind of sugar in lumps, which, like the other produce of the talooka, is sometimes sold by the makers at the neighbouring markets, but most generally is exported by merchants from other parts. Of the vegetable productions, those

which will only succeed in gardens or by constant irrigation, are gujuree, heerekaee, genusoo and bendegidu. The first may sometimes be sown in very good moist black soil in the field; but with all the natural advantages such land may possess, the roots are exceedingly small, and it is consequently very seldom grown except where abundance of water can be provided it. Moolungee is a large kind of radish, and is sown only here and there among belloollee and oolleegudde. The following, besides the two latter, may also be sown in alluvium, near nalas, &c.: chowleegidu, hagulkaee and sowtekaee; and these may be followed in the same season by a crop of wheat or gram, or by the budnekaee. Of all the vegetables, the only kinds requiring transplanting are, I believe, gujuree and oolleegudde.

I am not aware that the fruit trees need any particular mention, but at all events the following notice regarding them may not be altogether out of place. The mango and jack fruit are, like other trees, uncertain in the quantity of fruit they yield, and are not confined to gardens. The cocoanut is not used here for the manufacture of oil, but enters largely as an article of diet into the food of the people. The tree, if well taken care of, begins to yield fruit in 15 or 16 years, and the average number of nuts obtained in a year from each is about 60, and the value about two rupees.

The plantain yields only one crop when it is cut down, but new shoots spring up around the roots, which are transplanted and placed in a small pit with manure, earth and dry leaves, and well watered every eighth day. They are planted in lines at intervals or from four to five feet, and bear fruit in the second year, after which, as just mentioned, they are cut down. In some cases a year of fallow succeeds to the digging out of this tree, and then follows most generally the betel creeper.

The betel-nut tree, if well cared for and plentifully watered, bears fruit in eight years; otherwise it does not begin to bear for 10 or even 12 years. An acre will contain upwards of 600, and each tree yields about five seers in the year, in average value a little more than three annas. This calculation shows the produce of an acre planted with this tree to be equal in value to about 120 rupees. But they are seldom thus planted, and are most generally scattered here and there among the betel creeper. The prices I have mentioned of course apply only to what the ryot receives for his produce, and not as to their value then retailed.

The guava and lime trees are not numerous, being only planted at the corners or round the borders of the gardens. Their fruits, like those of all the preceding, are sold in the markets in, or near

to, the district. The same remarks apply to the two species of citron which are found in this talooka.

18. Having now hastily touched on most of the crops, vegetables and trees, contained in the tables (page 113) of this report, I shall now proceed to the only one remaining particularly requiring notice, viz.—

19. *Rice.*—This important crop, the principal one on the western village of this district, and in the northern parts of Hangul, is in some lands the only one raised, but in others it is alternated with sugar-cane, &c. There are nearly as many varieties of rice as of jolu, and I have discovered 12, which are as follows :—

1. Konkunsalee Sunbhuttu.
2. Beele-som-sallee.
3. Dodigya.
4. Kure-bhuttu.
5. Hukulsalee.
6. Bullesomsalee.
7. Kemp-bhuttu.
8. Mooluruvee.
9. Yemilien-bhuttu.
10. Jeerigsalee.
11. Dubunsalee.
12. Beedursalee.

The two first of these are accounted the best, and are the most expensive. Regular rice fields are divided into perfectly level compartments, averaging in breadth from a few feet to 15 or 20 yards, the length being regulated according to the pleasure of the cultivator, or the position of the ground. The general slope of the ground, or hill side, forms the whole into a series of terraces, each one or two feet higher than that immediately below it, and each having its front protected or raised by a small embankment (forming part of the descending step) about a foot in height. The effect a hill or rising ground produces, carefully laid in this way, is very pleasing, and must be so particularly to one who, till he had seen such a sight, has, it may be, entertained ideas depreciatory of native agriculture, or of the trouble the ryot takes with his fields. Such a view, or a visit to the gardens even in this backward talooka, would, I imagine, be sufficient to remove all such erroneous impressions.

The soil in the rice-growing part of the talooka is a clayey mould, but so very much modified by the treatment it receives necessary for such crops, that it may be considered more an artificial soil than any other in the district, excepting perhaps old garden land. The earthy matter of the soil itself is principally composed of the decayed clay slate, on which it rests, which, by the action of water, tillage and the weather, soon becomes a stiff, compact, light-coloured clay, and very retentive of moisture,—so much so, indeed, that in the most of the lower localities water is met with throughout the year at a few feet below the surface. This description of land may be divided into three classes :

1*st.*—That on the highest and most exposed situations, which, being nearer the more indurated parts of the subjacent rock, have less depth, is therefore poorer in quality than that lower down

and from more exposure to the winds loses its moisture quickly, and is capable of producing, even with the assistance of manure and all the care of the cultivator, only one inferior crop of rice in the year.

2*nd*.—That between the highest and lowest situations, which has been enriched by deposits on its surface from the higher grounds, has greater depth of soil, is less exposed, and therefore more retentive of moisture, and, as is generally the case, has been longer under cultivation. This description of soil, in seasons when there has been an abundant or even an average supply of rain, generally retains sufficient moisture to enable it to yield, after its usual crop of rice, another of some kind of pulse.

3*rd*.—But the most valuable of this class of soils is that in the valleys or lower situations. It is generally very different in appearance from that on the higher lands, and though the same originally, it is in reality, from the change it has undergone both in position and in its component materials, a soil as much superior to the kind first described as the best black of the plain is to the poor red sand of the quartz rocks. Its colour is either black or a rich dark brown, and may almost be classed under the head of alluvium. It is that in which the most luxuriant after-crops are obtained, and in which sugar-cane best succeeds, from its abundant moisture. It is difficult to compare these three classes of soils to any in the plain. The best rice-land, it is well known, is much more valuable than the best cotton-land, which has no means of irrigation; but how much more so, it is not easy to discover. This occasionally requires manure, and that about every third year. This seldom requires the labour and expense of ploughing, but that requires them every year. But conversely, though the best black of the plain may sometimes yield a second crop in the year, the best rice-land does so invariably, and this with less labour than is required in the former. For, in the black, to prepare the soil for a second crop it requires to be ploughed, and then broken by the koonte, afterwards levelled with bulle-sal-koonte, then sown by the kooreegee, and again levelled with the bulle-sal-koonte; whereas in the best rice-land the field is simply ploughed once, is sown by the hand closely after it, and to cover the seed the korudoo is run over the surface. I should, therefore, be inclined to view these kinds of land distinctively, and in this case to say that this rich land was in the rice-growing districts what the best black was in the plain; that the middle class of the former answered to the brown or superior red of the latter; and that the inferior kind of the former corresponded to the inferior red of the latter. I am afraid this will be considered a digression, but the nature of the subject led so naturally to it as to prevent my evading these remarks.

The labour bestowed on the three kinds of rice-land above described is nearly alike. The inferior kind after harvest seldom or never retains moisture to allow of its being ploughed at that season; but the middle class, even when not moist enough to yield an after-crop, is always sufficiently so to permit of its being ploughed. This renders it fit to receive more readily those occasional showers which fall during the dry season. By exposing the roots of the stubble, grasses, &c., it hastens their decay, and the stiff surface clods being subjected to the intense heat of the sun, and the pulverizing action of the weather, are rendered more friable, and the land consequently more easy to be worked when the period of commencing operations for the ensuing season again comes round. When this is done, it suffices till the end of March, about which time manure is laid down along the fields in heaps. In the beginning of April the clods are broken by the korudoo, or, if still very hard, by coolies with sticks. In fields which have not been ploughed after harvest, nothing is done, saving the laying down of manure, till the first rains of the season, when the field is ploughed, and pulverized by the korudoo. The manure is then scattered broadcast from a basket, and the surface turned up by the koonte, which is followed as usual by the korudoo again, and this finishes the preparatory operations till sufficient rain falls to admit of sowing, which is performed by a small kind of kooreegee. In the rain rohinee, as soon as the village astrologer has nominated the auspicious day to commence, the kooreegee is decked with green leaves, a few reverential salaams are made to it, and then sowing begins. As in the plain, so here, the kooreegee is closely followed by the bulle-sal-koonte, to cover the seed; and to level the surface, the korudoo again comes after. In about eight days the seed has sprouted, and in eight days more weeding commences with the yedee koonte, and is repeated as often as required—generally once in 10 or 12 days. In two months the kooreegee is used for this purpose, the crop being too high, and the fields too full of water for the yedee koonte. The weeds are always left to rot in the place where they grew, and this constant supply of vegetable matter is one of the principal causes of the peculiar texture and richness of the soil. About this time, when the surrounding ridges have been well repaired, the earth cut from the front by the hook-shaped saw (Diagram, No. 5), and heaped upon them, and the beds are filled with water, the korudoo is passed over the crop. This gives a smooth and beaten surface to the soil, so that the water may not readily sink into it, but remain as so many pools in which the rice may flourish. The main supply (of water) is derived from the rains, but in lands situated low enough to allow of it, it is also derived from tanks. In other places, courses are made from the higher grounds, and branches

from them led to the different fields. It is cut by the hooks (called koodugoloo) in November, a few days of heat sufficing, after the surface has dried, to ripen the crop. The after-crops are gram, uwuree, hessuroo, ooddoo and ugushe.

Harvest.—After being reaped, the crop is left on the field, where it was cut, to dry more perfectly, after which it is tied in sheaves, and built into a stack, with the ears of the grain outward, and in this condition remains to dry thoroughly for a month. A pole is then fixed in a part of the field, and the ground for a few yards round it is hardened, to prevent cracks, &c. This is well cleaned and swept, and the sheaves loosed and scattered over it, and six or eight bullocks, placed closely side by side in a line, are driven over them slowly round the pole. This is continued till the whole of the grain has been separated from the straw, when the latter is removed, and fresh sheaves laid down to undergo the same process. Thrashing over, winnowing now follows, which is performed by an equally simple and effectual plan; namely, by filling a flat basket (Diagram, No. 12) with the grain, and slowly emptying it on the ground from as high as the upraised arms can hold it. The dust, leaves, &c., are thus blown aside by the wind, and the clean grain by its own weight falls on the ground prepared for it. It is then conveyed to the village, and the husk removed from the rice by the toluleekaloo (Diagram, No. 9), a sort of wooden hand-mill, when it is again winnowed in the manner just described. When all these operations are ended, it is stowed in a large round basket, or safe, of wattle and daub, raised on beams laid across large stones, so as to elevate it a little space above the ground, and it is covered by a thatch roof (Diagram, No. 13). Every ryot's house has one such, in which not only rice, but most of the other grains, are stored. Those most generally stored in pits are, I believe, only jolu, wheat, gram, toguree, hooroolee and mudukee.

20. It now only remains, before I commence to report on the trade of the district, to make some remarks on the first subject alluded to in your letter, namely,—

21. "Condition of the villages."

There has been hitherto, for some cause or other, such a want of care to put the villages in order, or want of precaution to keep them in order when they are so, that a European will seldom, if he can avoid it, pass through them, and they are consequently little known. The total absence of all drainage, of common conveniences, of regularity in the building of the houses, or of removing filth and decaying matter from the immediate neighbourhood of the walls or hedges, render them, even in the most eligible situ-

ations, eminently unhealthy. This is, if possible, made worse by the great quantities of cactus which are allowed to grow high and rank round many of the villages: they shut out the wind, are hiding-places in which filth largely accumulates, and inclose an atmosphere of stagnant air which it is nauseous to approach. But indeed everything connected with the village economy is so faulty, that I should in vain attempt to draw an attractive picture of their condition; and this does not apply particularly to this portion of the country any more than to others through which I have passed.

The villages of the Hoobleo Talooka, however, I have observed, are now being put into a proper state of drainage; tolerable roads made through them, instead of the dirty uneven streets there have been hitherto, and arrangements made for keeping them clean. This is also beginning to be carried into effect in this district, and has been so already in most of the larger villages. Were the villagers, when building new houses, bound to do so according to some plan as regards their position, it would materially assist the improvements. These must have a most salutary effect on the whole district, and be productive of greater health and comfort, as well as more proper notions of neatness and cleanliness among the inhabitants. It is to be regretted, however, that the people are not required to make proper roads between the villages, those now in existence being almost impassable for carts, and from their deep ruts scarcely fit for passengers or bullocks. The labour to clear away large stones, bushes, or other impediments, to fill up the ruts, and level the ground, would be comparatively light, and the ryots have abundant leisure to spare for this employment after their harvest operations are finished till the approach of the monsoon requires them again to attend to their fields before which time all the roads might be in good order. Besides the advantage to all concerned which this improvement would yield, it would also heighten the boundary marks on each side; and were low hedges added, in time it would not only protect the fields from cattle, but improve the bare appearance of the country generally.

The houses of the ryots, in and near the jungle in the west, are almost all of mud, or wattle and daub walls, with thatch roofs. These appear to be internally (when in good repair) as comfortable as the houses in the eastern parts, which, as a general rule, are entirely of mud, with flat roofs. Tiles are very little used, and an occasional house in some of the villages only is to be seen covered in this manner.

The former unsettled and insecure state of the country compelled the cultivators for self-defence to remain together, instead of having their dwellings near their fields; and custom, which

rules all things in this country of castes, has continued the practice. Thus, we come upon no solitary farms away from the village, but instead of this we find, during harvest, watchmen tending the produce in the field by night, and in large villages the ryots going long distances to their fields to labour, and after the work of the day returning as far. This, doubtless, is one of the chief causes why the cultivators of Government land evince so little care about its improvement. If instead of his house being apart from his farm, he had home and farm together, he would be induced to take long leases of them, and care more for their permanently good condition; we should see less neglect of the boundaries, and fewer water-courses, which are yearly making their appearance over almost every field, and during the monsoon washing gradually away all that really constitutes the wealth of the land. As things now exist, we find each village a kind of separate republic, with its own peculiar interests, and entirely independent of those around it. Besides its revenue and police officers, almost every village contains within itself the means of supplying all its wants, and no village deficient in these is considered complete, or as it should be.

The holeyuroo, or pariahs, have generally the drudgery and cleaning of the village to perform, in consideration for which they obtain yearly a certain quantity of grain from each of the cultivators; but in cases even where they do their duty efficiently, their own quarters, apart from the dwellings of the purer castes, are continually in such a state of loathsome neglect, filth and putrid animal matter, as to be sufficient of themselves to convey contamination, disease and death throughout the village. Around their abodes there is a lasting golgotha, where dead animals in all stages of decay, and bones bleached white with age, ought to excite the villagers, if indeed they have any sense of shame, or care for their own comfort, to cause such nuisances to be removed far away or burned. But male and female, being all accustomed to the want of both public and private conveniences, their sense of shame and delicacy are too much blunted to expect any improvements on this score to proceed from them.

One custom I would beg to bring to your notice most particularly, with the sincere hope that, the fact being known, steps may, ere long, be taken to prevent so reprehensible a practice being continued—I allude to the burying of bodies in cultivated fields. There is no restriction to this; and standing in the midst of flourishing crops there are often within a very little depth of the surface, under the feet of the unconscious looker-on, uncoffined human bodies slowly corrupting and feeding, as it were, by their very juices a crop rank with corruption, and obtaining almost directly, through its roots, a supply of putrid nourishment which it

shocks the mind to think of. This is aggravated when we think that in the dry season the cracks which intersect the surface are as deep as, and by their ramifications deeper than, those buried bodies, and that, therefore, there must be a constant current of infectious effluvia from below as long as there is matter to produce it.

At Yeluwugee, during the cholera a few months ago, the dead were buried in a rice field near the tank which the year before was under cultivation. That field is again sown, and rice of nearly five weeks' growth covers it; and the carelessness in which interments are conducted renders this practice, if possible, still more revolting. When their dead relatives and friends are thus summarily disposed of—when the plough is passed over their graves by those with whom they had daily intercourse—and when all traces to mark their last resting-place are thus unfeelingly destroyed—we cease to wonder at the want of comfort, or cleanliness, or anxious desire for reform, so manifest among such people. This is connected with no part of their religion, and therefore an order from the proper authorities, and allotments of ground for burial-places to the various castes, could without difficulty put an end to it, and the people would doubtless be as ready to enter into such arrangements as Government could be to enforce them.

The cultivators, having nearly all their produce purchased from them at their own doors, may be said to have no trouble in its disposal after the harvest operations are concluded, and are therefore easily circumstanced. This in general appears to be the case, not only with the holders of land, but also with the labourers, who are satisfied when they have enough to eat; and the small amount of clothing they require, with a coarse blanket to wrap around them in cold or wet weather, and all these, as a whole, they possess.

With these remarks I now proceed to the last subject specified in your letter, namely—

22. "The manufactures of the district, and whether (they are) for export or internal consumption."

The only town in which any regular trade can be said to exist is Bunkapoor, which, being four villages united, contains the largest population of any in the district.

The great majority, however, as in the rest of the villages, are ryots, and failing in this quarter to find any considerable amount of manufactures, much less is to be expected from other places mostly or wholly agricultural.

It is the chief place for the manufacture of coarse cloth worn by the common people, as dhoturs, &c. I was informed by the

weavers themselves, that about 300 such articles of various sizes were manufactured and disposed of every week, and that nearly three-fourths of that quantity were exported (chiefly to the west and south-west) by themselves. These average, at a high valuation, about six annas each. There is another class of weavers (nearly all Mussulmans), employed in the weaving of turbans, and they are, I believe, the only makers of them in the district. There are about 150 so engaged, and they have constant work, but the prices of their goods made for a people simple in their manners and far from extravagant or gay in dress, are so very low (ranging from two annas to no higher than a rupee each), that their profits must be proportionally small; of this article of manufacture, also, nearly three-fourths are exported, and generally by the people themselves. The cause of this small amount required for the district is that the bulk of the population are Lingayuts, who wear, instead of turbans, either dhoturs or roomals, with ornamented or coloured borders round the head, and roomals are all imported from other places.

Besides these there are five mills for expressing oil from the seed produced in the lands of the village and those round about. These are constantly at work throughout the year, and produce daily about five maunds (200 seers) of oil. Of this quantity, one-fifth part is sufficient for the town itself; the greater part is exported, chiefly by merchants from other districts, but also by the oilmen themselves.

These are the chief manufactures of the place, and they are sold in the weekly market of the town, and also at those in the vicinity. The other trifling articles manufactured, and similarly disposed of, are kumbulees, shoes and sandals, cotton twist, earthen pots, &c.; but besides the workmen required for the necessities of the town, such as carpenters, loom-makers, tanners, goldsmiths, blacksmiths, potters, tailors, distillers, butchers, &c., there are no others deserving notice.

In the different markets of the district imported articles are disposed of to a similarly limited extent; and in the largest bazaar I should doubt whether the total amount of merchandize of all kinds disposed of each market day amounted to 1,500 rupees. The articles exposed for sale are grain, cloth, female apparel, thread, fruits, vegetables, sugar, oil, gool, spices, salt, kumbulees, cocoa and betel nuts, betel leaf, and occasionally vessels of brass, and copper, &c., &c.

The shops contain small supplies of these articles, but the wants of the people being few and limited, the amount of business is proportionally insignificant.

What has been said of Bunkapoor may be understood in a narrower sense as applicable to the other market towns in the district, to which, on their several days, the people resort from the surrounding villages. In some of the smaller villages there are sometimes weavers of coarse cotton cloth and kumbulees, but these are only for the use of the village, or sale within the district.

23. With these observations I would conclude my report on the agriculture and manufactures of the district, and attempt lastly, as requested in the latter part of the 7th para. of your letter, to give the results of my inquiries on another subject, and with which I shall close this report, which, although I have considerably condensed, has run out to a far greater length than I had any intention of allowing it to do.

Some account of the Geology of the District.

Bunkapoor.—Geology in this part of the country, from the total absence of imbedded organic remains, is a subject possessing less interest, and is less capable of enabling us to come to satisfactory conclusions regarding it, than in those places which, from anterior local elevation, or subsidence of the land, possess its most attractive features, and where "faults", fossils, and a thousand other proofs, remain as witnesses of former races of beings, and of the mysterious and mighty workings of nature in ages long passed away.

But, though these be wanting, there are still those general appearances in its formation which must arrest the attention of every geologist; and in alluding to them, though an argumentative essay, or any speculative theory of my own, would be entirely out of place, the few and simple remarks I have to offer on the subject will not be altogether in vain, should they either be the means of calling attention more to this section of the science, yet so full of doubt, or tend to elucidate any of the theories which have been formed regarding it.

The whole district is of the primary strata, being argillaceous schist, containing pyrites; and this formation appears not to be confined to it, but to extend into other districts on all sides over very extensive areas. It is found fine near Misreekota, but it is generally coarse, and in the plains very much decayed. Its direction is not uniform but varies from N.N.W., and even N.W. to N.N.E.; its inclination is so very little, that it must be termed vertical, but as a general rule dipping towards the east. I was, however, surprised to find in the hilly tract near Yeluwugoe and Rolojeekop the exposed schist very frequently dipping towards the west. This inclination I have never met with except in that part, and found it rather a difficult matter to explain. It is true that

such inversely dipping portions are adjacent to large veins of quartz, but so are also the other parts of the district, and in these I have never observed the strata inclining in the least towards the west. I can only account for it by supposing that the causes which formed the quartz rock in that part of the district were more violent in their action than those which brought about similar rocks to the westward, and I am the more led to think so by the greater disturbance the dykes in the former have undergone. The slate in the northern part is seldom, if ever, found but in a state of decay, and in appearance very much resembling pipe-clay. In the southern, eastern and western parts, namely, in all the hilly tracts, it is also found much decayed, but as frequently very much indurated.

This latter is especially noticed in particular localities, where, from the igneous causes of the quartz and dykes, it is frequently so much so as nearly, and in some places wholly, to have lost its slaty structure. The absence of mines or quarries, however, as it prevents us from examining a fair section of the formation to any depth, must render any geological account of this district, at best, both doubtful and superficial. But as even a superficial notice of it may be of some use, and, at any rate, better than none at all, I have been induced, in spite of this discouragement, to send you this brief account. This want of mines or pits of any magnitude prevents us from saying how far the modifications it presents on the surface extend internally, or of estimating the probable depth of this formation; but the latter appears, from the height of the hills and adjacent valleys, where the rock on which it rests is exposed, to have been at least 300 feet, and probably much more. To estimate the depth of a formation from the height of the hills, in districts where elevatory forces have thrown up the strata with them, would evidently be a most erroneous method of calculation; but of such a force having formed the hill here, there is not the slightest proof. On the contrary, there is every mark of their having been formed by gradual detrition; and, indeed, were there any doubt of the soundness of the theory that great part of the changes brought about on the earth's surface were wrought by this slow but certain and powerful agency, this district would of itself be sufficient to prove it, in as far as regards the primary strata. All the hills, except those which are of pure quartz, are crested with dykes, parallel to the slate on both sides, which does not appear to have undergone any change except close to them, where it is slightly crystalline, and impregnated with metal. These dykes I suppose are but metamorphosed slate, their clayey basis, direction, &c., and the occasional stratum of burnt white granular clay between the dipping masses, favouring this opinion; small veins of quartz are often found in them, and the slate im-

mediately in contact with them highly indurated; but I have never met with veins proceeding from them into the slate, as I constantly have where the hills or dykes are wholly of quartz. There is not the slightest appearance of, or approach to, an anticlinal axis in the district, and it therefore becomes a question whether these nearly parallel dykes (seeing that they have not violently broken through the strata) were formed, baked, as it were, by parallel lines of intense igneous action beneath the formation, and without displacement, or whether the schist has been rent by earthquakes, and the fissures filled with foreign materials. From the circumstances above stated (their apparent agreement in composition, &c., with the slate), I am of opinion that the former is the more probable.

In many places they are highly ferruginous, which has produced diamond-shaped particles throughout many parts of the rock, some of them being as large as a pea. These I believe are a chemical composition of iron and some other substance, and appear to be iron ochre. The same dykes are found near Gadag and Dumbul, and indeed wherever similar hills exist; but mica slate, if I am not mistaken, predominates there over the clay. There the underlying rocks appear to be granite or gneiss, but in this district the former is nowhere met with in this position. At Luksmeshwar, however, which adjoins it on the east, it is found, and, from specimens which I have of it, I consider it to be as fine and beautiful as any I have seen in the Collectorate. Its component minerals, except the mica, are light-coloured, and as fresh apparently as when first formed, and it perfectly corresponds in all respects with a similar rock to the west of Misreekotee, thirty miles distant, but is found nowhere between them.

It is worthy of notice, that though granite and felspathic rocks and veins abound in the northern and eastern parts of the Collectorate, felspar is never met with here, even in the smallest quantities; unless, indeed, it enters in a granular form into the composition of the underlying rocks. The whole district, as I have already stated, appears to be argillaceous schist, and in many parts resembling graywache; but near Goorunhullee in the northwest it passes into mica slate, which, however, I believe to be merely a limited and isolated variation.

The face of the country generally is a series of long and gentle slopes and risings, many of the latter, though parts of the plain are nearly on a level with the tops of some of the highest hills, which latter derive their height more from the depth of the valleys around them than from their actual elevation above the general level of the country. One cannot but be struck with the

conviction that the hills have been formed by the gradual wearing away of the plain when he observes this. There are many other concurrent facts along with this to fortify the supposition, but it would be too long a matter to describe them all. The two following, however, may be mentioned as among the most striking, which cannot fail to present themselves even to the superficial observer. I may here premise, that I do not mean to be understood as saying that the formation generally has undergone no upliftings; this it undoubtedly has along with the rest of the country; but as my observations have been almost confined to this district, my remarks, unless otherwise stated, are intended to be local, and applicable to it alone.

1. *Rivers, Nullahs, &c.*—The mere mention of running water ought to be sufficient to gain assent to these being causes of destruction to the surface, but except to one particularly noting their effects, they do not of themselves strike a person uninterested in the subject. There are few fields without a natural water-course, which, beginning from the smallest obstruction, increases, unless timely remedied, in a remarkably short period to a broad and deep nullah; slopes do not require their assistance, the rain water having on them momentum enough of itself to carry down into them the finer particles of the soil, but they are soon formed there also. These all lead to the larger nullahs, and these again to the rivers, and each, as often as it flows, carrying with it a supply of earthy matter from the lands through which it has passed. The rivers, especially during heavy rains, flow on to the sea with their waters heavily laden with the spoils of the land, and, undermining their banks on both sides, carry away large slips at a time. Villages which formerly had no nullahs near them are now being gradually washed away, and appear hanging over steep banks, and are every year being more and more undermined. At Munungee, a large nullah, which in the last generation had its course due north and south at a considerable distance west from the village, and there entered the river (the Wurda), has left that course, which is filling up, and now flows east, and enters it close to the village, on which it encroaches every monsoon. In width and depth it now rivals the river, and opposite to its entrance the united streams have within the last 15 or 20 years carried away land upwards of 30 yards long, 30 feet broad and 8 feet deep. The former bed of the river, scarcely 100 yards broad, is clearly traceable in the present course, which is now near the junction, and for a considerable distance at least 300 yards; and in the higher parts of this new bed are laid bare old and hard masses of conglomerate, composed of river sand and quartz pebbles, showing where the river formerly flowed. A section across the course when the stream is low would present the appearance shown in this sketch (No. 1).

(No. 1).

a, *b*, The breadth of the river when flooded.

c, *c*, Beds of conglomerate quartz pebbles and sand, showing that the channel of the river has gradually lowered, and is wearing away the land towards "*b*."

d, The present bed of the river during the dry season.

Since that time it has deepened its course, and, according to the resistance it experiences, is wearing away at different places the land on both sides; and though, from their streams being merely temporary and occasional, and their volume of water smaller, the nullahs do not show such lasting proofs of their destroying power, their existence at all, and the continual increase of their numbers, suffice of themselves to point out their effects, namely, the gradual wearing away and lowering of the surface, by which the more indurated rocks remain exposed, and by their detritus and adjacent slate form rising grounds or hills wherever they occur.

2. *Dykes.*—Another class of proofs is exhibited by the dykes which crest the hills or rising grounds. These are all boldest toward the west, whence the rain and strong winds beat upon them, and the slopes also on that side are much greater than toward the east, where they are exceedingly gentle. One instance of this among many is shown in the following sketch (No. 2) of a hill near Heere Bhendigerry.

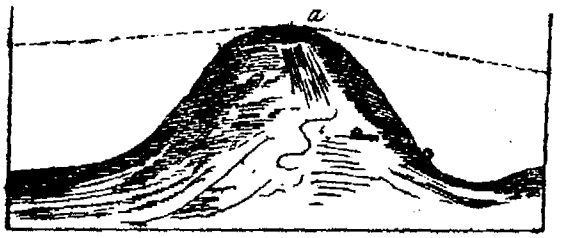
(No. 2.)

a, A dyke.—*N.B.* Slopes all considerably toward the west.

A few miles south-west of Seegaon is another hill, one of the highest in the district, and forming part of the continuous lines which range parallel with the slate. The dyke on its summit appears to have been broken through, as though there is a deep valley between it and the neighbouring rising grounds; it can

be distinctly traced in the same line of direction, nearly north-west and south-east, for many miles. It presents the appearance shown in the following sketch (No. 3), in which, at the point *a*, is shown the abrupt termination of the dyke. The dotted line shows its probable prolongation on both sides, before the slate

(No. 3.)



was washed away from its slopes. These are sufficient to prove that the general level of the country has been greatly lowered, and that the causes which are now destroying the level of every field, and leaving hillocks where igneous action has operated to harden the rock are the same which, by their slow but certain degradation of the surface, have in the lapse of time formed all the hills in this district.

I would conclude this short account of the geological phenomena of this part of the country by calling attention to the immense number of granitic boulders which lie in continuous lines, generally parallel with the ranges of hills, but sometimes in their direction ranging more from the north toward the west than the latter do. They are frequently found just exposed above the surface, but more so constituting eminences of themselves, and especially at Karudgee, where they most predominate. The boulders are of all dimensions, from the size of an egg to that of a cart-wheel, and are heaped together. The texture is nearly granular, and in this resembles gneiss, to which rock indeed they may belong; but as they have no appearance of lamination, and their fracture is uneven, I am inclined to consider them, as above stated, to be granitic. If they are erratic, they must have traversed very great distances, for, as far as I am aware, there are no hills of such rock near this part of the country. Darwin, in his "Journal of Researches" states that erratic boulders have never been observed in the intertropical parts of America, Asia and Africa, and that what were taken for such were not so. About nine miles south of Bunkapoor there is a large block, upwards of 12 feet square, exposed at the surface, and near one of the lines of boulders; and not far from the town of Bad are similarly large masses overlying each other, and with the blocks forming a small

hill. I have never been able to discover the depth to which such masses descend, or whether they are connected with rocks of a similar structure below the clay, but were this the case, it would be supposed that they would be occasionally met with in wells; but this, as far as I have been able to learn, is never the case. I have also found very large boulder-like masses laid bare by nullahs in the plain, and in all respects resembling the above. Looking at the face of the country generally, there is now no appearance of valleys or rivers down which torrents might have transported them; and as it is impossible to suppose that this region has ever been visited by icebergs, which in colder climates are said to convey masses of rock from place to place, it is difficult to believe that they are erratic at all. It might be supposed that the slate rests on rock of this structure, and that by some violent earthquake it was rent, and masses thrown up, and that these have withered to their present form. But, considering that, wherever it is found, it presents this same boulder-like formation, apparently resting on the slate, and also that its texture is totally different from the granite found both to the east and west of the district, this supposition also seems doubtful. That the country has undergone any great change by violent means since the formation of the schist, or rather of dykes, is highly improbable, but that it has been frequently visited by slight earthquakes or subterranean igneous forces, the dykes and quartz hills attest. The natives have no tradition of any such phenomena having occurred, but this is not at all remarkable, as they seldom note any events which do not affect their own concerns. A slight earthquake occurred in 1844, and was experienced at Gujungurghud, whence intermediately it was felt at several places as far as Soundutty in the west; and turning south, but passing Dharwar, it was experienced at Heere Bhendigerry, and thence toward Hangul. Remarkable as one would suppose they would consider this, the people of the places where it was felt have almost entirely forgotten it; and even those in whose houses heaped-up articles were overturned, only remember that such a thing did happen, that it was at night, and that heavy rain accompanied it. But they cannot tell in what time of the year it was; and the people of the neighbouring villages scarcely remember the phenomenon at all. From such it is useless to look for any information on these subjects, the mere fact that they are above their comprehension making them well content to consider them as no part of their business to investigate or record.

In conclusion of this brief and superficial survey of the geology of the district, I beg to add that I shall be happy to furnish specimens collected in my researches of any of the rocks to which

I have alluded, should such be required, with notices of the places whence they were taken, their position, &c., &c.

I have, &c.

(Signed) D. YOUNG,
Assistant Superintendent.

No. 1382 of 1846.

TERRITORIAL DEPARTMENT—REVENUE.

To

E. H. TOWNSEND, ESQUIRE,
Revenue Commissioner, Southern Division, Poona.

Collector's Office, Camp Hooblee, 10th October 1846.

SIR,

I do myself the honour to forward, in original, a report by Captain Wingate, Superintendent of the Revenue Survey in the Southern Mahratta Country, on the survey and assessment of the Bunkapoor Talook in this zilla.

2. A description of the climate of Bunkapoor, its markets and agricultural and revenue management, under the former and present Government, is given in the first 20 paras. of the report, of which paras. 19 and 20 only require any remark. In para. 19 is shown the difficulty of getting any satisfactory data, owing to the manner in which the accounts have been kept at different times. Up to the year 1834–35 the net Jummabundee appears only in the accounts, and therefore we cannot know what remissions and what deductions were made by the Settling Officer. From 1834–35 till 1840–41 inclusive, the remissions at the Jummabundee, and deductions for cowles, are shown, which, added to the net Jama, form "the gross rental or Kumal." From 1840–41 up to the present period, in addition to the remissions at the Jummabundee, and cowle deductions, all deductions on account of land held permanently at fixed rates below the "Kumal," equivalent to the "Khund mukta" tenure, are included, and which, added to the net jama, the Superintendent terms the full "Kumal."

3. In the 20th para. is an explanation of the diagram. In drawing his inferences from the facts elucidated by it, Captain Wingate has not been quite so precise in his language as could have been desired, and a person unacquainted with the district would be

apt to be misled in consequence. For instance, he says, "every year of low assessment is followed by an extension, and of high assessment by a contraction, of cultivation." From this sentence it might be inferred that a different rate of assessment was imposed every year; whereas such is the not case. The nominal assessment has been the same ever since we have had the country; but the proportion the collections have borne to it have varied according to the quantity of remissions given at the jummabundee, and the contraction and extension of the cowle system; and, therefore, instead of "every year of low assessment, &c., was followed by an increase of cultivation, &c.," it should be, "every year of low collection was followed by an increase of cultivation." It is very curious to observe that remissions given, as they must be under the best system, in a very haphazard manner, and the much-abused cowle system, which has been supposed to enrich village officers at expense of Government and the ryuts, have been the means of increasing the revenues of the one and improving the condition of the other.

4. In the 21st para. an opinion is given as to the condition of the cultivators, in which I am inclined to agree, though I am afraid that the substantial cultivators bear a very small proportion to the whole body of ryuts.

5. From the 22nd to the 28th paras. Captain Wingate describes his plans of assessing the dry-crop lands of the talook. He proposes to have four classes of villages: the 1st class will contain sixteen (16) villages, lying along the western border; the 2nd division will contain fifty-five (55) villages, lying immediately east of the preceding; the 3rd division will comprise thirty-six (36) villages, situated still further eastward; and the fourth or most easterly division, there will be thirty-one (31) villages. The classes have been settled according to their supply of rain and the distance they are off from the great markets.

6. The highest rates in these four classes are as follow:—

	Rs.	a.	p.
1st Class.....	1	12	0
2nd „	1	8	0
3rd „	1	6	0
4th „	1	4	0

"The maximum rates are to be considered those of the 1st class, while the inferior will be proportionally lowered according to their relative values, as determined by the survey classification."

7. The above rates will give an average for the whole talook of 13 annas an acre. The average of the present rates is Rs. 1-2-3, which is five annas and nine pies higher than those proposed; but I quite agree with Captain Wingate, that the reduction is by no means

more than is required ; in fact, I am rather doubtful whether further reduction would not have been advisable, for it must be borne in mind that the cultivation has been declining for many years, and that more than half the talook is out of cultivation, besides which, the utter stagnation of the cotton trade in this province, without any apparent chance of its reviving, render a very great reduction imperatively necessary.

8. From the 29th to the 38th para. inclusive, Captain Wingate details the circumstances connected with baghait cultivation from tanks and wells. He shows that since we have had possession of the country there has been no attempt to increase "baghshaye" or baghait cultivation from a tank. He also shows that in one instance a garden cultivator pays as high as 40 rupees an acre, and is well-nigh ruined, as might be supposed, when the average realizations throughout the whole talook, on this description of cultivation, is only Rs. 14-6 an acre.

9. The Superintendent, in my opinion, lays down in his 32nd para. very clearly the principle on which this description of cultivation should be assessed.

"The tanks being constructed and kept in repair at the expense of Government, Government is entitled to the enhanced rent arising from the increased fertility of the soil consequent on irrigation, but is not entitled to anything whatever over and above this." And in the following para. says:— "In considering the amount of assessment we should confine our attention to those producing the ordinary annual crops yielding an immediate return to the cultivator." And he comes to the conclusion that, "supposing sugar-cane were planted in the most favourably situated gardens with the best description of soil, it could not bear a higher rate of assessment than 15 rupees an acre." This appears a low rate when as much as Rs. 40 is collected at present: however, there is only one instance of this amount being collected, and the average is under fifteen (15) rupees. The cultivators of these gardens are no better off than other cultivators, and there has been no extension of this cultivation. It is, therefore, very clear a very great reduction is necessary. The average of the proposed rates is not stated; but Captain Wingate tells me he expects it will be about 10 rupees an acre; and as that officer is practically acquainted with the subject, and has considered it attentively, I would beg to recommend his proposal being acceded to.

10. Before quitting this subject, I would beg to observe that Captain Wingate has not alluded to one cause of the falling off in the cultivation of the description of baghait, *viz.*, the gradual filling up of the tanks; for it is very obvious, as the tanks are filled

up and become shallower, the supply of water diminishes, and the cultivation of garden produce must decrease. The gardens which are furthest off from the tank are first thrown up; and in the course of years, baghait cultivation ceases altogether.

11. And here I would take occasion to remark, that the revenue management of districts in which there are tanks, and gardens cultivated by means of them, is most unsatisfactory. At present, in the smaller description of tanks the ryuts petition the Collector to make repairs, who orders the survey and estimate to be made; if within a certain sum, he orders them to be executed. He cannot always visit the tank, and therefore cannot know whether the outlay is judicious or not; and in the case of larger tanks, nothing is heard of them, until a bund bursts, or the bed is so choked up as to be incapable of affording a sufficient supply of water. A reference is then made to the engineer, and the amount of the estimate for repairing is so excessive that great difficulty occurs in obtaining the sanction of Government.

12. There does not appear to me to be any reason why the tanks should not be placed under as strict a supervision as the public buildings of a Collectorate. An Executive Engineer is appointed to the Dharwar Collectorate, who has very few military duties. There would be no difficulty in his having in his office a register of all the tanks in the Collectorate. They should be arranged in classes, showing the quantity of land irrigated by each, and the revenue collected by Government and Enamdars; and they should be surveyed every year, and annual and special repairs made accordingly. The only thing required to carry out this arrangement would be an Act to make it compulsory on the Enamdars to contribute their proper share of the expenses of repairs.

13. Five rupees is the maximum sanctioned for well gardens; and it is proposed to extend the same maximum, to which there does not appear to be any objection.

14. In paras. 39 to 42 are contained proposals for assessing the rice lands, the highest rate being five (5) rupees an acre for the best lands admitting a rotation of sugar-cane, and the lowest one (1) rupee an acre, according to the quality of the soil.

15. In the 43rd and 44th paras. it is shown that the revenue under the proposed settlement will range from 10,000 to 20,000 rupees higher than it has ever done.

16. In the 45th para. allusion is made to the absorption of the sheep-grazing tax, and taxes on fruit trees. The former could only be levied where right was given to graze, and as all land is now divided into numbers, and that which is waste, with exception of a small portion given to the village cattle, is sold by

numbers to the ryuts, the only means the professional sheep-grazers (and there are no others in this zillah) have of obtaining pasture for their sheep is to enter into competition with the ryuts, and bid for the waste numbers.

17. I quite agree with Captain Wingate as to the perniciousness of the fruit-tree tax. During its continuance scarcely anybody planted trees, and if they did, invariably petitioned for a remission of assessment; whereas, since its abolition, such a spur has been given to planting, that in a few years this will be a well-wooded country.

18. Paras. 46, 47, 48 and 49 do not call for any remark more than I beg to recommend that the proposals contained in the 47th and 48th paras. be acceded to.

19. From paras. 49 to 61 Captain Wingate describes the faulty constitution of the Bunkapoor Talook, and makes proposals for amending it. The extraordinary manner in which the villages were distributed among the Mamletdars and Mhalkurries in this zillah when the latter officers were appointed, has been the subject of general remark. Mr. Blane, when on circuit in 1843, brought it to the notice of Mr. Shaw, and in 1844 the Government sanctioned the transfer of several villages from the Dammul to the Nowlgoond Talook; and a further transfer of four (4) villages from the same talook, and a new re-distribution of villages to the Mamletdars and Mhalkurries of the Nowlgoond Talook, in 1845. Mr. Goldsmid was so struck with it when Superintendent, that he made out and forwarded a plan involving a change in all the talook. This plan, however, was attended with a great increase of expense and was not sanctioned. It is most important that no village should be so distant from the cutcherry that the Mamletdar cannot visit it without inconvenience to the discharge of his other duties, or that a ryut would prefer submitting to injustice or oppression rather than be at the trouble of making a long journey to the cutcherry; and there are many advantages attendant on villages being situated within a convenient distance from the cutcherry, which are too well known to you to render it necessary for me to dilate on. "In the Bunkapoor Talook, as proposed to be constituted, the great mass of villages will be brought within six miles of their respective cutcherries (*vide* dotted arcs of that radius on map;) and, with the exception of a few outlying villages of Kullus, there will not remain a single village at an inconvenient distance from any of the cutcherries."

20. Captain Wingate appears to think that his arrangement might be objected to, because it broke up the old mhals, and that the chief reason for keeping them entire is a supposition that the hereditary officers of a district have duties to perform connected

with the management of the villages which compose this district. This I cannot suppose to be the opinion of any person who is practically acquainted with the constitution of the Indian village community and the revenue management of the Bombay Presidency. In the Southern Mahratta Country these officers have been, with very few exceptions, ciphers for very many years. Tippoo attached all their wuttuns; and when the Peishwa released them, a very heavy jodee was imposed on them, and they are now reduced as a class to extreme poverty. I believe they were never employed by the Peishwa's farmers, and since we have had the country, only as common carkoons. Up to 1833-34 they were never asked to do anything. In that year you were Sub-Collector of Hooblee, and gave an order that they should either do duty themselves or furnish substitutes; but this was not obeyed till 1836, when Mr. Dunlop repeated it; and from that time they have furnished carkoons according to the wants of the service, who have been employed—not in any particular way, but—in all descriptions of the miscellaneous duties of a district cutcherry.

21. To Captain Wingate's arrangements I see no objection whatever, and beg most strongly to recommend their being sanctioned.

22. From paras. 62 to 69 Captain Wingate descants on the importance of improved internal communication to the stability of the new settlement, and the urgent need of particular lines of road being immediately constructed. Of the justness of his observations not a doubt can be entertained, but the little attention paid to recommendations on this subject renders it almost useless to write about it.

23. In answer to Captain Wingate's report on the assessment of the Hooblee and Nowlgoond talooks, the Government say in para. 15—"The all-important subject of roads is forcibly dwelt on in para. 139 of Captain Wingate's report, and concurred in by you in para. 25. While Government are expending large sums in the confessedly important work of surveys, it is tantalizing to see their liberal efforts paralysed by the barrier placed in the way of improvement in the want of roads. So much has been said and written on this subject already, that it would be superfluous to add to it. So soon as the state of the Warree country shall admit of peaceful operation on the Ram Ghaut, the subject of that miserable road, and the extreme importance of adopting and constructing a better line of communication between the Collectorates of Dharwar and Belgaum and the coast, will be fully considered in the General Department, to which this subject will be transferred:" and yet what has been done? I hear nothing more than deputing Lieutenant Stuart for a month to the Ram Ghaut.

If I recollect rightly, in one of the Jummabundee reports, written by you as First Assistant Collector in Belgaum, you wrote that it was as absurd to expect the internal resources of the country to improve without good roads, as the commerce of Bombay to increase if a belt of sand were deposited at the mouth of the harbour. Every body appears alive to the necessity and importance of roads; but, beyond writing about it, it is impossible to effect any progress whatever. Adam Smith published in 1776 his famous work in which was clearly shown the truth of free-trade principles; and yet it was doomed that the long period of 70 years must elapse before the nation could be convinced. It is to be hoped so long a period will not be required to convince the authorities of the absolute injury and loss the people and Government sustain by the opening of the internal communications being deferred.

24. Appended to Captain Wingate's report are the reports of Lieutenant Francis and Mr. Young. They are replete with interesting information, and do those gentlemen very great credit. I would here beg to bring to the notice of Government that, owing to the zeal and abilities of the Assistants in the Revenue Survey, the operations of the survey progress without the least difficulty, and the duties are carried on with the same systematic regularity as those of a long-established office. Captain Wingate's merits are too well known to Government to receive any additional value from any testimony of mine.

25. A very beautiful map accompanies Captain Wingate's report, which shows to what a pitch of excellence this department of the survey has arrived.

I have, &c.

(Signed) S. MANSFIELD,
Acting Collector.

No. 2182 of 1846.

To

R. K. PRINGLE, Esquire,
Chief Secretary to Government, Bombay.

Poona Districts,
Revenue Commissioner's Camp, Lonee,
5th November 1846.

Sir,

I have the honour to transmit a letter from the Acting Collector of Dharwar, dated 10th ultimo, forwarding one from the

Superintendent of the Dharwar Survey, dated 29th September, with enclosures, being reports of his Assistants, Messrs. Francis and Young; the subject of the whole being the rates of assessment proposed for the Bunkapoor Talooka of the Dharwar Collectorate.

2. Of this district, which forms the most central part of the Collectorate, an interesting description, geological, historical, &c., &c., is given in these reports, to which I need only refer the Honourable the Governor in Council; any attempt on my part to render Captain Wingate's lucid report more full and intelligible than it is already, would be lost labour. In the title page "an Abstract of the Report" is given, which is, in fact, an index, showing in what part of the report every separate subject is discussed.

3. To the past history of the district and its revenue management no reference appears necessary; all management, where measurement is uncertain, and rates arbitrary and unequal, must be, at best, an alleviation of misrule. The diagram in para. 19 shows past cultivation, gross assessment, demands and collections; a blue column discovers the new kumal, amounting to 1,15,000 Rs. This includes nine villages, which, for reasons stated in para. 19, are omitted from the rest of the diagram. The produce of grazing farms and farms of fruit trees (same para.) are also included in the "new kumal," though not shown in the "average net rental of last 28 years," which is marked with a red line. The value of both these farms, and of the nine villages already referred to, should be added to the average rental, to complete the comparison with the new kumal; this more perfect comparison is, however, afforded in para. 43 of the report, to which I would solicit a reference.

4. The old kumal is not given in the diagram (*vide* para. 19), but though its amount did not influence that of the present assessment, I think that its entry, as a standard of comparison, would have been an improvement to the diagram. The latter document is, moreover, limited to Government land; it does not, therefore, include all the land of the talooka, nor show the value or extent of alienations. These, however, are subject to constant variation; new inams may be granted, or those which already exist may, from various causes, lapse to the State; as, then, the Government accounts include all lands, those which are alienated being afterwards deducted, and the remainder (subject to revenue) exhibited; so, I submit, should the new kumal be, its amount alienated being shown separately from that belonging to Government, and those alienated villages only being excluded whose owners object to the measurement and classification of their lands.

Vide para. 5 of Government letter, dated 29th March 1841, No. 993.

5. To lands occupied as kooruns (meadows) I observe no allusion in this report, nor am I sure that they are included in the

diagram. As they are annually put up to auction, their revenue is seldom affected by the assessment of surrounding districts; yet as, under altered circumstances of the population, of the prices of grains, &c., land at one time occupied as meadow, might, at a future time, be devoted to grain, the entry in the diagram of such lands, according to their assessment and classification, would perhaps be an improvement, should they not be already included in it. From the wording of para. 44, I infer that the value of all lands is included in the statement that precedes it.

6. In his 19th para. the Superintendent observes: "The effect of the survey settlement on the revenue derived from jodee and inam lands cannot be ascertained until the settlement of these tenures by the Inam Committee." The disposal of jodee or inam service lands of village officers is, I believe, not entrusted to the Inam Committee, but to the Survey Department. The disposal of jodee lands held by other parties is, I believe, entrusted to the Inam Committee, as well as that of lands strictly inam; but whatever be the ultimate disposal of these lands, their assessment should, I submit, be included in the new kumal; and this seems the more necessary, as many of them will no doubt ultimately lapse to Government, owing to the inquiries of the Inam Committee.

7. In the 20th para. the Superintendent explains the use of the diagram. An expression in this part of the report, which might be misunderstood, is explained in the Acting Collector's 3rd para. There can, I conceive, be no doubt of the fact, that the district under report has of late years been suffering from over-assessment, and that the present revision and reduction was a work of primary necessity, and which must tend to promote its prosperity.

Past average rates on dry land.

8. The past average rates for all sorts of land are shown (para. 22) to amount to Rs. 1-4-5 per acre; that for dry lands only (exclusive of garden and rice lands) to Rs. 1-2-3. That this assessment is more than the district can bear is, I conceive, clearly shown in this and the following paras. of the report; and the average rate proposed for dry lands (para. 28) of 13 annas is, I have little doubt, as high a rate as the district can bear; indeed, my only doubt is similar to that expressed by the Acting Collector (para. 7) whether this reduction will be sufficient. The highest rates of which this average is composed are stated by the Superintendent (para. 27), but not the minimum rates.

Garden lands.

9. Garden lands and its rates are discussed in paras. 29 to 38, inclusive, of the report. These are divided into those watered by tanks and those watered by wells, which are similar to the patasthul and motasthul of the Deccan. That the previous rates have

in many cases been perniciously heavy is shown clearly in this report, and the maximum rate proposed (para. 34) for tank watered gardens is, I am persuaded, quite high enough. The average of these rates is stated by the Acting Collector (para. 9) to be 10 rupees per acre. The principles which have guided the Superintendent (para. 32) in fixing garden rates appear to me in strict conformity with the views of the Honourable Court, as contained in their despatch of 15th February 1833, and which were transmitted, for the information of this Department, on 3rd March 1835.

10. The highest rate for gardens watered from wells is stated (para. 36) to be 5 rupees per acre; the average assessment per acre on this species of garden land, or that on all garden land of whatever sort, is not shown. The Superintendent states (para. 38) that the present assessment of garden lands yields a revenue of about 6,000 rupees, of which the new assessment will reduce about one-third, a reduction which will, I hope, afford sufficient relief to this hitherto over-assessed species of cultivation.

Rice lands.

11. The assessment and cultivation of rice lands form the subject of paras. 39 to 42 inclusive. The Superintendent shows that while the highest assessment paid on this sort of land has been 10 rupees per acre, its average last year was $4\frac{1}{2}$ rupees per acre; the rates proposed vary from 5 rupees to 1 rupee per acre. The Superintendent does not state the average which these rates will afford; but although the addition of this information would greatly add to the value of this report, the want of it does not diminish my confidence in Captain Wingate's proposals, which I trust Government will accordingly sanction.

Average rates of the new kumal.

12. The average assessment per acre of the new kumal on land of every sort is not given in this report; that of past years' rental is given at Rs. 1-4-5 (para. 22) for the last seven years. The average rates of the new kumal would be interesting, as affording a comparison with former rates actually levied. In para. 43 the new kumal is given, as compared with past realizations. The Superintendent does not suppose that it will ever be realised, but he expects that the survey rental will eventually exceed that of past years by 10,000 or 20,000 rupees per annum. The immediate financial effects of the survey cannot probably be stated with certainty, but they will appear from the result of the first year's revenue settlement of the talooka.

Grazing and fruit farms.

13. Grazing farms and those of fruit trees are (para. 45) included in the new kumal. The abolition of these separate items of taxation

is, I conceive, very beneficial; their amount is small, *viz.*, 400 and 200 rupees respectively. The Acting Collector appears to allude to this arrangement in para. 17 of his report, where he says that "such a spur has been given to planting, that in a few years this will be a well-wooded country." I sincerely hope that these pleasing anticipations will be fulfilled. The rates hitherto levied from fruit trees were reported to Government in my predecessor's letter of 6th May 1845, No. 627. The rules under which waste lands are disposed of, are continued in the Government letter of 12th September 1843, No. 2998.

14. The Superintendent states (para. 46) that the new rates include all huks of district and villages officers; the amount of these is estimated by Captain Wingate at 3,000 rupees per annum. The Superintendent does not state whether the levy of these huks from the ryuts has, in the meantime, been stopped or not. In my letter of the 13th ultimo, No. 2027, para. 29, I brought to the notice of Government that a different system was in this respect followed by the Ahmednagar and Deccan surveys.

15. This report includes (para. 47) the village of Behutty, lately part of the Sonee Jagheer, and which is now said to be included in the Hoobly Talooka. The Superintendent solicits sanction for the introduction of the new rates into this village, which are the same that were sanctioned for the rest of the talooka in Government's letter of 27th February 1845, No. 1024, and to this there can, I presume, be no objection. The new rates in the district now reported on are proposed to be continued for 30 years, which arrangement I beg to recommend for adoption.

Territorial transfer.

16. In paras. 50 to 59 are contained a proposition for altering the shape and distribution of the Bunkapoor Talooka and its subordinate divisions of "Kuruzgee," which is a Mahalkurry's thana, and "Kullus," which is at present managed by a karkoon. Captain Wingate shows very clearly the evils of the present division. He alludes in para. 57 to possible objections to the breaking up of mahals, and then proceeds to form his proposed districts into a number of circles, traced in dotted lines in a map that accompanies the report. These changes affect the talookas of Ránebednore, Kode, Hangul and Hoobly, parts only of which are exhibited in this map. Neither are the existing boundaries of these talookas so clearly marked as I could have wished. A little study of the map, however, and of the detail of transfers contained in Captain Wingate's 58th para., will show the very inconvenient shape of the old talookas, and the more compact form of the Superintendent's circles. A few villages transferred do not, indeed, come within these circles, as Bhadumguttee and Belowtee, transferred from

Bunkapoor to Hangul; but these are exceptions to the general rule.

17. Captain Wingate proposes to convert the karkoon at Kullus into a Mahalkurry, and in all his proposals the Acting Collector coincides. The latter officer does not state the effect of these transfers on the entire revenues of each talooka that is altered by them, nor the establishment and pay which he would propose for the Mahalkurry at Kullus. The establishment proposed for the latter is contained in the Superintendent's 60th para., but the Acting Collector should, I conceive, submit a plan, in which the present and proposed establishments of each district referred to will appear contrasted;—the whole causing no increase of expense.

18. I have endeavoured to form a statement from the materials contained in the Superintendent's 59th para. and the Acting Collector's annual report of last year, to show the present and proposed revenues of the Bunkapoor, Hoobly, Hangul, Ranebednore, and Kode talookas, both in the aggregate and separately, as placed under Mamlutdar and Mahalkurry; but as I find it impossible to do this from these materials, I will request the Acting Collector to frame such a statement, and to transmit it, along with the particulars regarding establishment above alluded to, and the details of Zumeendar's duties referred to in the following paragraph.

19. With the Superintendent's opinions, however, as expressed in para. 57, and the Acting Collector's, as expressed in para. 20 of his letter, I cannot altogether coincide: the evil of breaking up mahals is not, I conceive, a mere theoretical evil, as both these officers appear to view it. The duties of deshpandies were defined in the statement which accompanied the joint letter of 16th October 1845 from this Department and the Northern Division, and of which Government approved in their reply dated 19th February 1846, No. 759. In these are contained a number of distinct rules for the guidance of these officers, but to which the Acting Collector nowhere alludes. He should, I think, explain how the proposed territorial changes will be compatible with the performance of these duties by the deshpandies, with their existing complement of karkoons.

Roads.

20. The important subject of roads occupies paras. 63 to 69 of the Superintendent's report, and 22 and 23 of the Acting Collector's letter. The latter officer shows that Government are already aware of the vast importance of this subject to the welfare of Western India, and the preservation of the existing revenues of the country. When we see, then, so little done in this most important matter, it is

evident that there is some hindrance from without, and that further representations on this subject are superfluous. Government in appointing survey and assessment establishments have conferred a great benefit on the country, and per consequence on themselves; but the stagnation of internal traffic, owing to the want of roads and bridges, is an evil of very extensive influence, as will, I fear, hereafter be more generally perceived than it is at present. I would respectfully solicit the attention of Government to what Captain Wingate has written on this subject, and which appears to me to merit the most serious consideration.

21. The only part in which I differ from Captain Wingate is that towards the end of his 66th para., where he seems to think that two roads to the coast between the Krishna and Tungbhadra (or between the 15th and 17th degrees of north lat.)would suffice. This, I am persuaded, is not the case; but that a third is absolutely necessary. The only object of bringing this subject forward at present is, that any attempt to place two roads in such a position as to supply all this district must, I believe, lead to attempts to evade the great lines of traffic, and thus to failure. In the meantime, I trust that Government will sanction the piece of road solicited in para. 68, from Hoobly to Sirsee, in the Canara District.

Superintendent's paras. 12 and 13, &c.

22. I have passed over almost without remark the early part of Captain Wingate's report, and the interesting notices contained in it of the administration of these valuable districts under the Hindu Kings of Annagoondy. Any one looking at the map of India, and otherwise unacquainted with the country, would suppose the Bombay portion of the Deccan to be an extremely well-watered country. From Nassik southward, the Godavery, Mootamoolla, the Bheema, Krishna, Gutpurba, Mulpurbha, and a host of minor streams, intersect the country at very short intervals; but from October to May the channels of these rivers are nearly dry;—the precarious rains once passed, the floods which all these noble streams supply have poured into the ocean unimpeded, and the country through which they have passed remains as dry as if water had never reached it, and the crops on their banks withering through want of a little of that moisture which in their beds is being speedily conducted to the salt sea.

23. Had the empire of Annagoondy extended across all these rivers, we should have seen their beds every here and there barred across with embankments, to arrest these precious waters in their progress; but, unhappily, their dominions were as narrow as their duration was short; and the Deccan now derives little benefit from the various streams which pass through it, beyond that of supplying

men and cattle with drinking water; and on their banks garden cultivation is extremely limited.

24. To avoid detaining this report in transit, I have requested the Acting Collector to procure a copy of it from the Superintendent. I will also send him a copy of this letter, that he may supply the few deficiencies in the report which I have noticed, but on account of which it appears unnecessary to detain the whole report.

25. Finally, it occurs to me to suggest that, whenever reports of the settlement of a district, or an annual progress report, are received from a Superintendent of a Survey, duplicate and triplicate copies of them should be made in the Secretary's Office for transmission to each of the other Superintendents. Thus each of these officers would be made aware of the system proceeding under each survey; each would benefit by the experience and observations of the other Superintendents; and a degree of uniformity between the somewhat varying systems of the Deccan, Ahmednagar and Dharwar Surveys would be promoted. I would respectfully recommend that such copies be transmitted of this excellent report.

I have, &c.,

(Signed) E. H. TOWNSEND,
Revenue Commissioner, S. D.

No. 5007 of 1847.

TERRITORIAL DEPARTMENT—REVENUE.

From

H. E. GOLDSMID, ESQUIRE,
Secretary to Government;

To

E. H. TOWNSEND, ESQUIRE,
Revenue Commissioner, Southern Division.

Bombay Castle, 3rd December 1847.

Sir,

I am directed by the Honourable the Governor in Council to acknowledge the receipt of your letter, No. 2182, dated the 5th November 1846, with its accompaniments, as per margin, on the subject of the survey

Revenue Commissioner's letter, No. 2182, dated 5th November 1846; Acting Collector of Dharwar's letter, No. 1382, dated 10th October 1846; Reports by Captain Wingate, the Superintendent, dated 29th September, with those of his Assistants, Messrs. Francis and Young.

and assessment of the Bunkapoor Talooka of the Dharwar Collectorate and to convey to you the following observations.

2. From these papers the Governor in Council gathers that this talook possesses considerable natural advantages of soil and climate, a capability of yielding a variety of products, and a population not deficient in the industry and skill necessary to turn these qualities to account; and that a more equitable and moderate adjustment of its assessment, and improved facilities for the disposal of its produce, are all that is wanting for its prosperity.

Captain Wingate, paras. 5 to 11; Messrs. Francis & Young, *passim*; Revenue Commissioner, paras. 1 to 3.

3. Captain Wingate's account of the administration of the ancient Hindoo dynasty of Annagoondee, and the memorials they have left behind them in works of usefulness, and in the traditional respect of the people, is very interesting. The effects of their paternal system may have long since been obliterated or impaired under their Mussulman and Mahratta successors, and the reproduction of these may be a matter of difficulty under an empire constituted as ours; but the spirit in which their enlightened measures were conceived, if not the exact forms they assumed, must ever remain a worthy object of imitation.

Captain Wingate, paras. 12 to 16; Revenue Commissioner, paras. 22 and 23.

4. The circumstance of a precise measure of extent, such as the acre, having now been in use for many years under our Government, and an authentic series of accounts being obtainable, affords advantages in tracing the progress and estimating the effects of the more recent revenue administration of this talook, such as are not always to be had on occasions such as the present, and these have been made available in a convenient form in the diagram framed by Captain Wingate.

Captain Wingate's paras. 18 to 20; Mr. Mansfield, paras. 2 and 3.

5. You consider that it would have been an improvement if this diagram had been made to exhibit as well the alienated and extra sources of revenue as that from Government cultivated lands; but viewing its object as being rather an exhibition of the relative and progressive than of the absolute state of the revenue, the Governor in Council is disposed to think that although it might have been well to insert in it the additional matter you desire, if it could have been done without impairing its simplicity and clearness, it is not of such essential importance as to be attempt-

Revenue Commissioner, paras. 4 to 7.

ed, to the risk of those. He would also remark, in reference to your observation on this point, that the use of the native term "kumal," as being ambiguous, and sometimes applied in different senses, had better be avoided; the thing intended should be described in terms indicative of its exact meaning, even if some periphrasis be necessary, because in such points verbal accuracy is of importance to a correct appreciation of the reasoning.

6. The diagram shows a considerable fluctuation in the annual amount of realized revenue, and latterly a gradual decline of cultivation. Captain Wingate considers, and in this you appear to concur, that by exhibiting an increase of cultivation consequent upon a decrease of realizable revenue and *vice versâ*, it establishes the existence of general over-assessment. This appearance, however, seems to the Governor in Council only to establish the fact which its exhibition in this form was perhaps hardly necessary to obtain an assent for, that a relaxation in the revenue demands must tend to stimulate cultivation, and an enhancement to repress it, an effect which would probably be equally observable whatever was the general pitch of the assessment. Over-assessment is a relative term, and must depend on the standard by which it is estimated. It is not perhaps very easy to fix this standard by any general definition; but the Governor in Council can readily believe that with advertence to the rates of assessment in other districts, the general tendency and known results of the survey operations, the decline in the price of cotton, which forms a principal staple in this talook, and the present limited extent of cultivation, a considerable reduction in the assessment was desirable, and will be beneficial. For the precise point to which it should be carried, he must trust to the adjustment and experience of the Superintendent, and in this he has every confidence.

Captain Wingate, para. 20. Revenue Commissioner, para. 7.

7. The average rate of assessment for past years on cultivated land is stated to have been Rs. 1-2-3 per acre, and the proposed average rate on the whole cultivable unirrigated land to be 13 annas per acre, being a difference of 5 annas 3 pies, or about 28·76 dec. per cent. This reduction, with reference to the considerations adverted to in the last para. and the probable average inferiority of the whole cultivable to the actually cultivated land, does not appear to the Governor in Council excessive in calculating the exact proportion of reduction. However, some further allowance would be requisite, though probably to no great amount, for the inclusion in the new rate of the hitherto extra levies of the huckdars.

Captain Wingate, paras. 22 to 28; Revenue Commissioner, para. 8.

Captain Wingate, para. 46; Revenue Commissioner, para. 14.

8. In classifying the irrigated land, Captain Wingate has made a primary classification of villages, with reference to climate, markets, &c., subordinate to which is the ordinary classification for difference of soil. The grounds for the former classification appear to the Governor in Council, so far as he has the means of judging from the descriptive notice of the localities, satisfactory; no detail is given of the principle on which the subordinate classification has been effected, but the Governor in Council presumes it is similar to what has been adopted, reported and approved on former occasions.

Captain Wingate, paras. 25 to 28; Mr. Mansfield, paras. 5 to 7.

9. The opinions of Captain Wingate in regard to the principles on which the garden land, whether irrigated from tanks or wells, should be assessed, seem generally just; it occurs, however, to the Governor in Council, that the present high rates of assessment on betel and cocoanut plantations may not be chargeable with the objections usually urged against the regulation of the assessment by the description of the produce, inasmuch as they may only be an equivalent for an abatement or total remission of the assessment during the many years in which the trees were arriving at maturity. Such a mode of assessment is known to be usual in its application to valuable plantations, such as those in the neighbourhood of Haveree, and a good deal might be said in its favour; but, on the whole, the Governor in Council is disposed to concur in the opinion of the Superintendent, that a moderate fixed assessment, even at some sacrifice of revenue, is preferable, as tending to the promotion of improvement, and being more conformable with the principles on which the land generally is assessed under the survey.

Captain Wingate, paras. 29 to 33; Mr. Mansfield, paras. 8 to 13; Revenue Commissioner, paras. 9 and 10.

10. Under the proposed rates it is stated that the assessment on lands irrigated from tanks and wells will be reduced by about one-third, which does not appear excessive with reference to the circumstances adverted to in the last para., the proportion of reduction on unirrigated land, and the absolute amount of the proposed maximum rates, as compared with those prevailing on similar cultivation in other districts. But this, too, as well as the relative classification of these lands, are points in which much must be left to the discretion of the executive officers.

Captain Wingate, paras. 34 to 38.

11. Similar considerations induce the Governor in Council to accord his assent to the proposed assessment of the rice lands, the reasons for which, in as far as they may be estimated from a report, seem satisfactory.

Captain Wingate, paras. 39 to 42; Mr. Mansfield, para. 14; Revenue Commissioner, para. 11.

12. The only practical estimate which can be given of the financial result of the new settlement is that which the Superintendent has omitted to furnish, but should be required to furnish on all future and similar occasions, namely, its immediate effect in the existing state of things as compared with that which would be produced by the application of the former system. The estimate furnished by Captain Wingate, founded on a comparison of the amount due from the whole cultivable land under the proposed assessment, with that realized from the whole cultivated land under the former assessment, affords no sure ground of inference as regards the effect on the finances, inasmuch as it is affected by the contigency of the extent of cultivation. It may be assumed, indeed, *à priori*, that the financial effect of a better adjusted as well as a more moderate assessment, if in the right direction, will be by no means in the proportion of the reduction, and may possibly be in an opposite direction, seeing that a judicious reduction of taxation has been often known positively to augment the resources of the State; but this is an inference arrived at by reasoning from experience, and is not deducible from a comparison such as that given by Captain Wingate, which may tend to mislead, but cannot inform those unacquainted with the subject.

Captain Wingate, paras. 43 and 44; Mr. Mansfield, para. 15; Revenue Commissioner, para. 12.

13. The Governor in Council has no objection to offer to the proposed discontinuance of the taxes on sheep and fruit trees, the former as being separately provided for in the new mode of disposing of grass lands, and the latter as being injurious in its operation. As regards the latter, however, he does not clearly understand whether it is prospective, or, as might be inferred from the Acting Collector's observations, has actually taken effect.

Captain Wingate, para. 45; Mr. Mansfield, para. 16; Revenue Commissioner, para. 13; Mr. Mansfield, para. 17.

14. The introduction of the survey assessment in the lapsed village of Behutty is approved.

Captain Wingate, para. 47; Mr. Mansfield, para. 18; Revenue Commissioner, para. 15.

15. The Governor in Council is pleased to sanction the declaration of the permanency of the settlement now reported, for the usual term of 30 years.

Captain Wingate, para. 48.

16. The Governor in Council entirely concurs in Captain Wingate's arguments in favour of an improved territorial distribution of the Bunkapoor Talook and its neighbourhood. Whatever reasons there might be for the preservation of the old relations between the zemindary mahals and the talooks, in the

Captain Wingate, paras. 50 to 61; Mr. Mansfield, paras. 19 to 21; Revenue Commissioner, paras. 16 to 19.

absence of any obvious advantage from their disruption, he considers the accommodation of the territorial distribution to a machinery now obsolete, quite a subordinate object to its most advantageous arrangement for the efficiency of the existing machinery and system. A subsequent communication from you, No. 1230, dated the 12th June last, submits the details of a plan for giving effect to Captain Wingate's proposition, which will be considered, and the instructions of Government upon it communicated to you separately.

17. The Governor in Council deems it unnecessary on this occasion to enter into a detailed consideration of Captain Wingate's observations on the subject of roads. The abstract importance of such works is obvious and undeniable, while their advantage in any particular instance must depend on the various special considerations affecting it. The remarks on this subject, however, contained in the papers now before Government will be transferred to the General Department for consideration, along with the measures to which they relate.

Captain Wingate, paras. 62 to 69; Mr. Mansfield, paras. 22 and 23; Revenue Commissioner, paras. 20 and 21.

18. It is satisfactory to learn that the old distribution of the fields, the derangement of which was objected to on some former occasions, has been maintained in the survey of this talook.

Captain Wingate, para. 70.

19. The Governor in Council has perused with interest the reports of Captain Wingate's Assistants, Messrs. Francis and Young, which, especially the latter, are replete with valuable statistical information, and he considers both to be highly creditable to the research and ability of their authors.

Mr. Mansfield, para. 24.

20. The approbation of the Governor in Council has been so often conveyed to the merits of Captain Wingate's own labours, that on the present occasion it will be sufficient to remark that they are in every way worthy of his former reputation.

21. The Governor in Council fully concurs with you in the advantage of general dissemination of information such as is contained in these reports, and, conceiving that it may be of use, not only among our own officers, but also among those engaged in similar duties in other parts of India, he will direct 200 copies of Captain Wingate's report and its accompaniments to be printed, with a view to distribution.

Revenue Commissioner, para. 25.

I have, &c.,

(Signed) H. E. GOLDSMID,
Secretary to Government.

No. 227 of 1876.

To

THE REVENUE COMMISSIONER, S. D.

22nd January 1876.

SIR,

I have the honour to submit a report, No. 7, dated 4th January 1876, from the Honourable Colonel Anderson, Survey and Settlement Commissioner, S. D., being his proposals for the revision of the assessment of 138 villages of the old Bankápur Táluka and one of the Hubli Táluka.

2. The re-measurement has been complete, and it is satisfactory that every recognized share of an inám number has been made into a separate survey number, and still more so that survey numbers containing mixed inám and Government land have been made into separate numbers.

3. With reference to Colonel Anderson's remarks in para. 4, I am still of opinion it is wrong in principle to make independent survey numbers when their area is less than the minimum fixed for this district. It is true there were cases of one occupant with several sub-occupants having recognized rights. These cases were generally owing either to decrees of the civil Courts or owing to brothers having divided interests. In such cases the sub-sharers would have recognized shares and their names would appear as sub-occupants.

4. If, however, on every revision all these recognized shares were made into independent survey numbers, irrespective of their being below the minimum fixed for the district, then there would be too large an increase of the minute sub-divisions of land. As, however, this is the last re-measurement that is ever likely to take place, the present increase of small numbers cannot be very great, and it is unnecessary to further press the question.

5. Colonel Anderson clearly shows that the shortest, best, and most economical plan was entire re-measurement. That there has been so little difference between the measurement of the old and present survey, both when the whole area or when minute divisions are considered, is highly satisfactory.

6. The manner in which the re-classification has been conducted will, I think, meet with approval. It is especially satisfactory that the precautionary measures of—

(*a*) having, when the original classification was over 10 annas, small percentage examined to discover truly the standard which took effect in each village;

(*b*) that the old classification has been carefully examined and borne in mind in re-classification, statements having been prepared, showing the former and present classification of every field re-classed; and

(*c*) that when excessive difference was found between the present and old classification, the new classification has been reduced to an extent never exceeding one class.

By these careful precautions the chance of error has been kept at the lowest, and grounds of discontent are avoided.

7. Colonel Anderson is correct in describing the portion of the Collectorate now under revision as containing nearly the best black or mixed black and red soil in the district. The portion of the district is well situated as regards rainfall, the climate is damper than other parts, and here the exotic or New Orleans variety of cotton succeeds better than elsewhere.

8. The people as a whole are prosperous and well-to-do. That the non-agricultural population is comparatively large, may be attributed to—

(*a*) the fact that Dhundshi and Háveri are large wholesale trading towns, while Bankápur and other smaller places are also places of no insignificant trade;

(*b*) that a large number of people, owing to the opening up of roads and increase of traffic, live entirely as cartmen;

(*c*) that much of this part of the country was the centre of a powerful Mahomedan rule (under the Nawábs of Savanúr), that there is here a large Mahomedan population who seem to take to no fixed employment, and consequently swell largely the numbers of the non-agricultural class.

9. There are comparatively few ploughs, and, as explained by Colonel Anderson, that is due to the fact that in mixed black and red soil the cultivators do not use a plough, but simply a "kunti."

10. As regards horses being more abundant in Bankápur than in Navalgund, it is a fact that bullocks are very largely used in Navalgund for riding, and that grazing land for ponies is scarce in that táluka. In Bankápur bullocks are not so much used for riding. This may be owing to there being plenty of grazing ground for ponies, and to the fact that the Mahomedan population in Bankápur are fond of horses.

11. It is to be regretted that more reliable figures as regards past prices were not obtainable in Bankápur. In para. 35, Colonel Anderson states, "the figures shown under Bankápur are unre-

liable," and it is uncertain whether the error arose from some confusion in conversion of old sers, or whether erroneous information has been designedly given, which Colonel Anderson considers not improbable. The Mámlatdár till very lately in charge of this táluka had formerly been Shirastedár under the Survey and Settlement Commissioner himself, and should have known how important, careful and well-prepared price returns are. Of late this Mámlatdár's work had proved very unsatisfactory, and as he was old, I was obliged to compel him to retire as inefficient.

12. Considering all the difficulties as regards correct returns of former prices, I am of opinion that Colonel Anderson has adopted the best and at the same time a perfectly fair principle, in considering that the prices in Bankápur would be about one-fifth less than those given for Hubli in para. 51 of his Hubli Revision Report.

13. It must, however, be remembered, when comparing the Bankápur Mámlatdár's returns, Captain Godfrey's returns, and the Hubli returns in the *Government Gazette*, that the Bankápur, Háveri, and Dhundshi markets are large wholesale markets for rice and grain, and that Hubli, though a large market, must be said to be more retail than those of Bankápur, Dhundshi, and Háveri, at which three places the wholesale dealers buy up grain for retail at Hubli, Dhárwár, and even Belgaum. Considering all the various circumstances affecting prices pointed out by Colonel Anderson, I think the Survey and Settlement Commissioner is perfectly safe in saying the ryot is now 80 to 100 per cent better off as regards grain than on the first decade of the expired settlement, and that rice rates may be trifle less.

14. Cotton, however, is the principal export of the táluka, and in the villages under revision the exotic variety succeeds better than elsewhere. It is a fact that even now the ryot receives Rs. 135 per khandi in place of the Rs. 50 he formerly obtained.

15. There is very little waste land in the villages under revision. The proportion of waste in 1866-67 was 1,155 acres, in 1874-75 it increased to 2,779. Previous to 1866-67 every one was mad to obtain a plot of ground on which to cultivate cotton; thus land only fit for grain crops was planted with cotton, and other land only fit for grazing was taken up and attempts made to cultivate it. As the price of cotton fell and the ryots found the new land taken up was not suitable, such as was bad was given up, and this accounts for the late increase in waste land.

16. I quite concur in the views adopted by Colonel Anderson in grouping the villages under revision, and the maximum dry-crop rates proposed.

17. The point on which I have considered there would be always most difficulty in our revisions in this Collectorate, was when we touched the rice-land country. I am glad to say that in the present instance Colonel Anderson seems to have most carefully and successfully met the difficulty. His description of the different kinds of irrigation cultivation in para. 53 is accurate and to the point, while his system of classification is satisfactory. The lowest class of "akasia" rice-land is thus saved from a heavy special rate, the 5th class being put as favourably situated dry-crop land, and the 6th class at the simple dry-crop rate, the effect being to keep down the assessment on the rice-lands, pure and simple, and to keep up that on the sugarcane lands.

18. Colonel Anderson's proposal to reduce the maximum garden rate to Rs. 12 and thereby equalize the garden rates, as also the manner in which he has dealt with well bágáit, are such as should receive approval.

19. I fully agree with the Survey and Settlement Commissioner that the increase in revenue might easily have been somewhat higher by increasing the rate on the central and north-western part of the táluka; but Colonel Anderson fairly and with caution observes that had this been done then in consequence of the low former assessment of many of the best villages, a good number of heavy increases would have occurred. Though these increases would have been fair and justifiable, yet such a course would have spread discontent, and I concur with Colonel Anderson that it was expedient to avoid this and be content with the more moderate increase now proposed by him.

20. As regards the revision rates proposed for Byahatti in the Hubli Táluka, the rates proposed are in every way satisfactory; and as they are similar to those sanctioned two years ago for the neighbouring villages of Kusugal and Sull of the Hubli Táluka, I recommend their being adopted.

21. In para. 34, Colonel Anderson remarks on the opinion expressed by me in my Nos. 527 and 612, dated respectively 20th February 1874 and 27th February 1875, that the amount of land held by other than Government occupants and sub-let is a matter for alarm. I regret that the arguments used by Colonel Anderson and Government have not enabled me in any degree to alter my opinion. Recent events (the riots in the Poona District) have on the contrary only the more confirmed me in the opinion that under our present system we are treading a most dangerous course, and one which is causing most unjustly dissatisfaction with our revenue settlement and is dangerous to the well-being of Government, by rendering the main body of the people not only mere instruments

in the hands of designing agitators, but also discontented with our rule. Year after year we go on fixing light and moderate assessments; the ryot suddenly finds he wants money, generally for an extravagant marriage: he has property (Government land) that he can mortgage: he does this, and this debt thus incurred, with its heavy and unbearable interest, soon ruins him. Instead of being the Government tenant at a moderate assessment, he has to cultivate as the tenant of a rapacious superior holder, or to grant him the lion's share of the produce of his land. Then this poor unreasoning man is by designing men taught to cry out that it is the Government assessment that has ruined him. In no country in the world but this is a tenant allowed to mortgage his farm. Unpleasant as it may be to find that our boasted system has in it a liberality that is dangerous to the well-being of the cultivator, the plain fact must be told, and if not admitted now, it must and will hereafter force itself upon the earnest consideration of Government. To me there appear to be but two causes whereby the evil can be met and overcome,

(*a*) by placing a very high and prohibitive assessment on non-cultivating occupants: or

(*b*) by legislating so as to render the mortgaging of Government land impossible, and by prohibiting the seizure of agricultural stock and implements by decrees of the civil Courts.

I have no doubt that this subject is receiving full attention at the hands of the Poona Commission, and cannot but feel that their opinion will in some way coincide with the views held by me.

22. Colonel Anderson in para. 74 refers to the bad state of the saw-gins—a question of vital importance to the exotic variety of cotton. I can clearly state that the condition in which these saw-gins are now is simply disgraceful. The owners will do nothing. I have proposed a simple and ample remedy that would in no way interfere with trade or dealers. My proposal was to fix a small license on all gins not worked by steam power, and to close all not in repair. This plan meets with the approval of all who know this district and its peculiar wants. Colonel Anderson remarks that this proposal has met with little favour from the general mercantile community in Bombay or from Government, though the European merchants on the spot and some in Bombay also deem some such measure the only practical remedy. With all due deference, I would point out that but few of the Bombay firms know any thing of the Southern Marátha Country cotton trade, that this trade is confined to a few houses, and these and the European merchants on the spot are more likely to know what is really wanted than the general mercantile community of Bombay.

Further I would urge that the proposal never appears to me to have had full play, for I am not aware that the mercantile community in Bombay have ever had the proposal put before them for consideration. The proposal has not met with approval at the hands of Government, and has been so disposed of, Government preferring to wait till European firms step forward and establish ginning factories. This is being done on a small scale, but I doubt if it will do what is wanted. *First*, it may not meet with success, for I hear the natives are combining not to sell uncleaned cotton. *Second*, they are being started at so few places and on so small scale, that the one or two ginning establishments now being started will do but little. The final result will then be that, owing to nothing being done, the New Orleans variety of cotton will from year to year fall in value, till at last its cultivation will be a thing of the past. I have honestly, and at the risk of being thought importunate by Government, urged this matter, and as in duty bound as a Government servant have plainly pointed out what I apprehend. Further measures now rest with Government.

23. I deem it necessary to offer a few observations on the remarks made by Captain Godfrey in para. 24. The necessity of improving the main road leading from Dhárwár to Haribar has on many occasions been pressed by me on Government. I am glad that Government has sanctioned the money necessary for spreading the metal that has been so long collected, and I trust that funds will be given to still further metal and improve this road. The two roads (Bankápur to Pála and Bankápur to Mundgod), referred to in the conclusion of para. 29, are excellent and completely bridged roads, and though only passing through a few of the villages under revision are of vast importance to these villages, as the one leads direct to Pála and the coast, and the other to Mundgod and the coast.

24. With regard to the remarks in para. 31, I regret that Captain Godfrey did not know this portion of the district formerly; had he done so, he would not have ventured on any condemnation of the present system which has done so much good to trade. As regards the road from Haveri to Havánur, it is a most important line, and is not merely a tracing, but is a fully-formed road, and now only requires the gradual construction of culverts and mooruming, and this is being done from year to year. This road is being extended on to Allur, and will throw the whole of this portion of the district open to the coast and be of immense value to all the southern tálukas. Previous to its construction, carts could only with great difficulty proceed to Havánur; now the traffic on this line is enormous, it having in fact become the main line of communication between our southern districts and Bellary.

25. The small branch from this road connecting Karajgi and Haveri is a useful road connecting these two towns, but is of far less importance than any of the other roads. This branch is all but a complete road, only two small culverts remaining to be built.

26. The road referred to in para. 30 (5) is one of the most important roads in the district. It branches from the Havánur road at Agari, and passing on to Karajgi and Savanúr, finally falls into the Poona road near to Hubli. This when complete (and many sections are far advanced) will be the main line, for the most of the produce of Bankápur and Karajgi finding its way to market. The road is not meant to open up the Savanúr State only, but Savanúr is so situated that it cannot help being, and is a centre for many of our main lines of roads, many passing through it. Thus the road from Pála to Bankápur is now being carried on to Savanúr, from thence it passes on to Lakshmeshvar and Gadag, and from thence on to Ron and Bádámi. As we can find funds, we are carrying out the different portions in each táluka, have made marked and lasting progress: and as the Miraj State intends to carry out the section in its territory, we hope in a few years to see this important line fully opened up. The section in the Savanúr State (five miles) is nearly complete. This road is referred to by Colonel Anderson in his 19th para. as being most important. The road from Shiggaon to Savanúr is another very important line of road—it is in fact one, and of the road from Mundargi to Shiggaon and Bankápur, Mundgod, and the coast. The section from Shiggaon to Savanúr, in place of being only a tracing as stated by Captain Godfrey, is a fully formed road, with several small bridges and most of its culverts built. One large bridge estimated at Rs. 8,000 will be left till other more pressing works are complete, and one or two years further grants will make this nine miles as good as any road in the district. The whole section (about four miles) in the Savanúr State has been completed as a bridged and moorumed road. From the other end of Mundargi, some five miles to Kalkera, have been fully made, and this year we are carrying on the road as far as our limits beyond the Virapur pass, and it is hoped we may be able to induce the Native States to carry on the line in their territory. This line of road is also referred to by Colonel Anderson as being much used and most important.

27. The road referred in para. 30 (7) as leading to Hulgur has been decided to be not emergent as yet. It only leads to Hulgur where a small jatra is annually held. The road being of no general use or importance, has been wisely abandoned.

28. On the whole I can conscientiously say that immense practical and useful progress has been made in communications,

places quite unapproachable by anything but pack-bullocks have been opened up to cart traffic, and a very few years will enable these roads to compete with any in this or any other district.

29. Reviewing as a whole Colonel Anderson's proposals, I can say, from a long and intimate acquaintance with the táluka, that they are such as should meet with the full approval and sanction of Government.

I have, &c.,
E. P. ROBERTSON,
Collector.

No. 281 of 1876.

REVENUE DEPARTMENT.

To

THE CHIEF SECRETARY TO GOVERNMENT.

Kanara Districts,
Camp Yellápur, 28th January 1876.

SIR,

I have the honour to forward papers, as per margin, regarding proposals for the revision of the assessment of one hundred and thirty-seven (137) villages of the old Bankápur Táluka of the Dhárwár Collectorate, which have since been re-distributed among tálukas as under:—

1. From the Survey and Settlement Commissioner, S. D., No. 7, dated 4th January 1876, and its several accompaniments.
2. From the Collector of Dhárwár, No. 227, dated 22nd January 1876.

Number.		Táluka.
80	remain in	Bankápur.
52	transferred to	Karajgi.
4	do.	to Hangal.
1	do.	to Hubli.
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Re-measurement and classification.

2. Paras. 3 to 11 of the Survey Commissioner's Report treat of re-measurement and classification which have been conducted on the same principles as those adopted in the tálukas of Dhárwár already revised, and which have received the full approval of Government. The descriptive details of the mode of conducting these important operations, given by the Commissioner of Survey, show clearly that they have been carried out in the most careful and complete manner with a view to prevent error and discontent as much as possible.

Description of the Táluka, &c.

3. Paras. 12 to 24 give a description of the táluka, its soil, climate, and rainfall, its productions, communications, and markets. The soil and climate vary very much in different parts of the táluka, and consequently there is a great variety of produce. It is satisfactory to find that "in no part of the táluka can the rainfall be called absolutely precarious and deficient on the average of seasons." Cotton is the staple production for export, especially the acclimatised New Orleans variety, for the growth of which the black soil of this táluka is well suited. The exotic cotton covered 71 per cent. of the total area under cotton last year. The other productions are so various that, as Colonel Anderson says, "they comprise nearly every kind of agricultural produce met with in Western India." As regards communications, there has been vast improvement in the past 30 years. In 1844-45 "there was not a mile of made road in the táluka or within many miles of it." Now communications are open on the north, south, east and west; and, as Colonel Anderson remarks, "wherever produce can meet with the best or most convenient market, the way is open to it." And of good markets, para. 21 shows, "there is no want both in the táluka and and in the immediate vicinity."

Comparative statistics, past and present.

4. Paras. 25 to 29 discuss the comparative statistics of 30 years ago and the present time. The following figured table gives the results:—

	At the time of previous Settlement.	1875.	Increase.	Decrease.	Percentage Increase or Decrease.
Population	67,722	88,869	21,147	...	+31·45
Houses... Flat-roofed and tiled ...	10,481	14,908	4,427	...	+42·23
Houses... Thatched ...	2,854	2,089	.....	765	—26·8
Agricultural Cattle ...	21,877	21,624	.....	253	— 1·15
Cows, Buffaloes, and their young	38,400	34,740	.....	3,660	— 9·53
Sheep and Goats... ...	18,064	12,976	.....	6,088	—33·7
Ploughs	No record.	7,708	7,708	...	...
Carts	1,641	4,115	2,474	...	+150
Horses and Ponies ...	912	939	27	...	— 2·96
Wells Irrigation ...	No record.	380	380	...	...
Wells Drinking ...	.....	224	224	...	...
Wells Out of repair ..	.....	140	140	...	...

From the above table the following are extracted as signs of prosperity:

	Increase.	Decrease.	Percentage.
Population ...	... 21,147	...	31
Good houses ...	... 4,427	...	42
Poor houses ...	... ...	765	26
Carts	... 2,474	...	150

"The population at present amounts to 218 per square mile—a large average rate for a district which is, in the main, dry-crop plain, without any large or manufacturing towns in it."

I think there must be some mistake in the figures for agricultural cattle, showing a decrease of 253; but it may be explainable in the manner suggested by Colonel Anderson, seeing that the increase in occupied area of land is only acres 4,562.

Sale value and subletting of land.

5. Paras. 30 to 33 treat of these subjects. Appendix A. "shows the high value possessed by land in this táluka." "Cases of sub-letting for money are very few," but "mortgages and leases are much more numerous." The "usual arrangement appears to be the making over a field for a moderate term of years, in consideration of the receipt of a sum down; the lessee engaging to pay the Government assessment during his tenure." "Sums equivalent to 10 to 15 years' assessment, and even double those proportions, appear to be paid down in this manner for a lease for that number of years * * *." In former Revision Reports of the Dhárwár Collectorate much information has been given regarding the high value of land, and the old Bankápur Táluka is certainly second to none in this respect.

It is estimated that 75¼ per cent. of the Government survey fields of this táluka "are actually cultivated by the occupant solely, or in partnership with others", and about 18 per cent. are sub-let. I regard this state of things as by no means unsatisfactory. The Collector views with alarm the proportion of fields sub-let; but I concur with Colonel Anderson, for the reasons given by him, that there is no cause for apprehension in this extent of sub-letting.

Prices of produce, past and present.

6. Paras. 34 to 41 treat of this important part of the subject. Colonel Anderson has had more than the usual difficulties to contend with in getting information regarding prices in past times. But after much careful consideration and comparison, he deduces the following conclusions that—

(*a*) "In the price of jowari, the ryot is now about 80 to 100 per cent. better off than in the first decade of the expired settlement;

(*b*) "In wheat, prices may be better now or about the same ratio;
(*c*) "In rice the rates of increase may be a trifle less;"

and he thinks that if there be any error in the above (admittedly) *approximate* estimates, "it is rather on the side of under-estimate." The great increase in prices in the second decade over the first is attributed to the great rise which began to take place in 1861, and (as will be seen by reference to Appendix D) reached its culminating point in 1863, the last year of the second decade. Colonel Anderson proceeds to show, however, that the principal export of the táluka is cotton, regarding the past and present prices of which staple produce there is reliable information. Thirty years ago the exotic American cotton had hardly been introduced into Dhárwár. The cotton then produced was the indigenous, known as 'Coompta' in the Bombay market. Its price then did not exceed 75 rupees per khandi in the Bombay market. Setting aside Rs. 25 for cost of transit and profits of middlemen, the ryot only got Rs. 50. Now, Dhárwár 'Sawginned' American is quoted at about Rs. 160 per khandi. Setting apart the above intermediate cost, Rs. 25, the ryot now gets Rs. 135, instead of Rs. 50, as in former times.

Colonel Anderson concludes that the ryot is in the article cotton alone "a full 150 per cent. better off at present prices than he was formerly," and that the fall of *Dhárwár sawginned* to 125 a khandi "would still leave the ryot about 100 per cent. better off than formerly."

Colonel Anderson finally draws this remarkable conclusion, that excluding the many exportable products named at the close of para. 41, the area (acres 45,089) under cotton alone, at the moderate estimate of Rs. 14 per acre average annual produce, will yield a total sum of over Rs. 6,30,000, or about three times the whole land revenue as proposed in his Revision Report now under review. It is to be noted that the above area under cotton is only one-third of the total Government arable land, and one-fifth of the total area of the táluka.

Past revenue history.

7. Paras. 42 to 47, read with Statement C of the Appendix, give the past revenue history of the táluka since 1836-37. The following figured abstract is given:—

Year.	Government occupied land.	Government arable assessed unoccupied land.	Collections on Government land.	Remissions.	Outstanding Balance at end of the year.
	Acres.	Acres.	Rs.	Rs.	Rs.
1836 to 1845 ...	156,158	55,269	86,849	14,935	7,107
1846 to 1855 ...	189,690	35,620	86,143	687	4,257
1856 to 1865 ...	221,632	3,664	106,943	1	...
1866 to 1874 ...	223,304	1,933	108,573	...	...

It will be seen that the figures from 1857 to 1874 leave nothing to be desired. The statement in para. 46 regarding the extent to which it has been necessary to resort to coercive measures for the realization of the revenue is also very satisfactory.

Proposals for revision of assessment.

8. This *most* important part of the subject is treated of in paras. 48 to 73. For the reasons given in his 48th para., I concur with Colonel Anderson that "*a considerable increase of assessment is justified.*"

Dry-crop soils, paras. 48 to 51.

Captain Wingate, in his original settlement of the táluka, made for dry-crop soils four groups of villages and four different rates as under :—

	No. of Villages.		Maximum Rate. Rs.	a.	p.
1.	15	to the west ...	1	12	0
2.	55	to east of above ...	1	8	0
3.	36	farther to the east...	1	6	0
4.	31	still farther to the east.	1	4	0
	137				

For reasons given in paras. 50—51, Colonel Anderson proposed 5 classes, somewhat different grouping, and the maximum rates as below :—

	Number of Villages.		Maximum Rate. Rs.	a.	p.
1.	52	48 included in Captain Wingate's 1-8-0 group 2 in 1-12-0 do. 2 in 1-6-0 do.	2	4	0
2.	50	9 villages in Captain Wingate's 1-12-0 group 7 in his 1-8-0 do. 34 in his 1-6-0 do.	2	0	0
3.	25	included in Captain Wingate's 1-4-0 group	1	10	0
4.	4	of Captain Wingate's 1-12-0 group	1	8	0
5.	6	of Captain Wingate's 1-4-0 group	1	6	0
	137				

Rice lands, paras. 52 to 60.

Under the last survey these lands covered an area of 2,655 acres, paying full Government assessment; they now comprise acres 3,105. The very careful and, I may add, most skilful treat-

ment of these lands by Colonel Anderson in his revision proposals deserve high commendation. It will be seen that the fair assessment of these lands was fraught with difficulty, because of their varying nature as regards advantages of water and situation, so much so that they are capable of division into six well-defined classes. It will be seen that in the first three classes, sugarcane may be grown at intervals under certain advantageous circumstances: the correct principles, and judicious treatment brought to bear by Colonel Anderson on the assessment of these lands, seem to me calculated to insure the best results, viz., the demand on behalf of the State of only a fair proportion of the produce. The precautions against imposing extra assessment on land improvements by the cultivator, which are not legally taxable, are specially worthy of notice; also the table in para. 56, explanatory of the combined water and soil classification.

The results under this head are—

(*a*) One maximum rate of Rs. 8 for the whole táluka.

(*b*) An increase in area of 450 acres, or 17 per cent.

(*c*) Increase in assessment, Rs. 4,457.

(*d*) Average per acre Rs. 3-4-5 against former average Rs. 2-2-6.

Bágáit or garden lands, paras. 61 to 64.

These lands, according to last survey, comprised a total of 1,458 acres, of which 866 were Government land. They now comprise a total of 1,516 acres, of which 965 are Government land. They are watered from wells and channels from tanks, but chiefly from the latter. The old rate was nominally Rs. 15, practically Rs. 14; and only in 12 survey fields did it exceed 12 rupees. Colonel Anderson gives sufficient reasons for limiting his maximum rate to Rs. 12. The treatment of well bágáit has been strictly in accordance with Government Resolution No. 1028, dated 25th February 1874.

The following statement shows the result of the imposition of the proposed rates on each group of villages and on the whole táluka:—

Class.	Number of Villages in each class.	Maximum Dry-crop rate.	By former Survey.		By Revision Survey.						Increase of assessment per cent.
			Government occupied land.		Government occupied land.		Government unoccupied assessed waste.		Total.		
			Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	Acres.	Assessment.	
		Rs. a.		Rs.		Rs.		Rs.		Rs.	
1st	4	1 8	3,142	3,437	3,476	4,951	245	398	3,721	5,349	44·1
2nd	50	2 0	48,164	36,291	50,260	54,478	2,732	1,250	52,992	55,728	50·1
3rd	52	2 4	44,019	47,976	44,975	74,991	528	302	45,503	75,293	56·3
4th	23	1 10	30,365	16,293	31,441	22,134	2,747	687	34,188	22,821	35·8
5th	6	1 6	7,081	3,954	7,181	4,848	4	1	7,185	4,849	22·6
Total ..	137	..	132,771	1,07,961	137,333	1,61,402	6,256	2,638	143,589	1,64,040	49·5

The following facts are noticeable from the above table :—

(*a*) The percentage increase is approximately 49·5, which may vary 1 per cent. either way on final examination of papers.

(*b*) The maximum percentage increase 56-3 is in one group No. 3, comprising 52 villages.

(*c*) The increase in the remaining villages is at 50 per cent. or under, the lowest increase being 22·6 in 5th class.

It is satisfactory to notice from Colonel Anderson's para. 70, that "there are no cases of very excessive percentages of increase on whole villages. There are three villages only showing increases in excess of 80 per cent. These as well as half the villages having increases between 70 and 80 per cent. are villages of the third, or Rs. 2-4-0, class, villages of the very highest advantages, and for which expediency, and not inability to pay, induced me to refrain from proposing a somewhat higher maximum."

The total area and assessment of the táluka under every head is shown in the tabular figured statement given in para. 71

The average per acre of the revised assessment on the whole Government occupied land is Rs. 1-2-10 against Rs. 0-12-7 of the existing assessment. Increase Rs. 0-6-3 per acre.

Village of Byáhatti.

9. Proposals for the revision of assessment in the detached village of Byáhatti, in the Hubli Táluka, are separately treated of in paras. 76—77. The Collector recommends their adoption (*vide* his para. 20) "as they are similar to those sanctioned two years ago for the neighbouring villages Kúsúgal and Sull of the Hubli Táluk."

10. It is satisfactory to learn from Colonel Anderson's para. 78, that the revision of assessment in the tract of country under notice is estimated to cost Rs. 38,800 only, and to yield an enhanced annual revenue of Rs. 59,863.

11. On the subject of improvement of communications, I beg the attention of Government to the remarks offered by Colonel Anderson in his 75th para.

12. It only remains for me to commend these revision proposals of the Survey Commissioner, concurred in by the Collector, for the sanction of Government.

I have, &c.,

J. E. OLIPHANT,

Acting Revenue Commissioner, S. D.

Revenue Survey and Assessment.

No. 1031.

REVENUE DEPARTMENT

Bombay Castle, 16th February 1876.

Letter from the Revenue Commissioner, S.D., No. 281, dated 28th January 1876—Submitting correspondence, noted in the margin, regarding proposals for the revision of the assessment of 137 villages of the old Bankápur Táluka of the Dhárwár Collectorate, which have since been re-distributed among the tálukas noted below :—

Letter from the Survey and Settlement Commissioner, S. D., No. 7, dated 4th January 1876.
Letter from the Collector of Dhárwár, No. 227, dated 22nd January 1876.

80	remain in	Bankápur,
52	transferred to	Karajgi,
4	„	Hángal,
1	„	Hubli.
137		

RESOLUTION.—During the 30 years in which the expiring settlement, the revision of which is proposed in these papers has been in force, the circumstances of this part of the country have materially improved. The introduction of the New Orleans variety of cotton has added greatly to the value of its resources, and not only have the prices of agricultural produce increased generally by what is estimated by the Survey Commissioner, on good grounds, to amount to a rise of from 80 to 100 per cent., but also the means of communication with various good markets within and near it have been multiplied, so that there is no longer any fear of those local gluts which in former days frequently neutralized the advantages of superior or more abundant crops. Government are aware, moreover, that Mr. Robertson and his Local Funds Committee are exerting themselves earnestly and intelligently in completing the lines of communication necessary thoroughly to open up the country, so that there is every probability of the existing favourable circumstances steadily improving. These considerations amply justify a large increase in the assessments, the 30 years' guarantee for which has now come to an end.

2. Colonel Anderson proposes a somewhat different system of grouping of villages for varying maximum rates of dry-crop assessment to that adopted by Captain Wingate at the first survey settlement of the táluka. The latter estimated the relative values of the soils highest in the western portion of the táluka where the

rainfall is heaviest, and lower as they receded to the east and the rainfall is lighter. It appears that Captain Wingate somewhat modified his own opinion on this point when he had become better acquainted with the country, and inclined to Colonel Anderson's view that the rainfall in the west was too excessive to answer well for dry-crop cultivation. Colonel Anderson has come to the conclusion that the central tract of the táluka, where the rainfall, although comparatively certain, is not too heavy, is the best adapted for this kind of cultivation, and on this ground, as well as its superior advantages in the way of communications with several good markets, Government concur in his estimate that the group of villages comprised in this tract should bear the highest maximum dry-crop rates. The next in order of value will naturally be the villages which adjoin those last-mentioned on the east, where the fall of rain is less certain but not in excess, and on the west, where it is too heavy, although constant. The last three groups proposed are those to the east of the táluka, where the rainfall becomes more and more precarious, and that in the extreme west, in which it is excessive. The reasons given for this grouping are, in the opinion of Government, good and sufficient, and it may accordingly be adopted.

3. The maximum dry-crop rates proposed in these 5 groups are respectively as follows:—

	Rs.	a.	p.
3rd group	2	4	0
2nd group	2	0	0
4th group	1	10	0
1st group	1	8	0
5th group	1	6	0

They will result in the following percentage increases:—

3rd group	Rs. 60·9
2nd group	„ 47·6
4th group	„ 35·4
5th group	„ 22·9

In the first group there will be a decrease of rather under 2 per cent. Under all the circumstances, Government are of opinion that the increases are moderate, and the settlement on the whole equitable. The rates may therefore be sanctioned.

4. The plan of re-classification of soils described in paragraphs 9 and 10 of Colonel Anderson's report is the same as that adopted in other tálukas in which revision has already taken place. The fault in the original system of classification adopted in the infancy of the survey, *viz.*, the too great approximation of the relative values given to superior and inferior soils has been rectified, and in cases in which the value of land under the new greatly exceeded

that under the old classification, an allowance of not more than one class has been made to cover any possible margin of error that might have occurred under the former. These proceedings, as well as those for the sub-division of survey fields reported in paragraphs 3 and 4, are fully approved.

5. A great portion of what is classed under the head of rice-land, in consequence of rice being raised in it, is in reality of such quality and so well supplied with water as to be capable of growing the far more valuable crop of sugarcane. The method of classification required to provide for this peculiarity is described in paragraphs 53 to 57 of Colonel Anderson's letter, and is judicious and well suited for the purpose. With regard to the maximum rate of assessment, it is explained that Captain Wingate's rate of Rs. 5 was tentative, and that in the Dhárwár Táluka it was raised to Rs. 8, which is the rate now proposed for the villages comprised in the old Bankápur Táluka. This description of cultivation is mostly confined to the 1st, 2nd and 3rd groups of villages, where the rainfall is constant; and as the total increase in consequence of the adoption of the proposed rate, inclusive of the assessment on 450 acres brought under it more than at the first settlement, is under 78 per cent., Colonel Anderson's proposals may safely be sanctioned. The method described in paragraph 56 as adopted to prevent the possibility of dry-crop land improved into rice during the currency of the expiring settlement, being assessed contrary to the provisions of Section 30 of Act I. of 1865, appears to provide for all such cases. Any others, however, which may come to light on the introduction of the settlement in detail will of course be specially dealt with.

6. The maximum rate proposed for garden lands is, as shown in paragraph 61, practically the same as adopted by Captain Wingate at the first settlement, *viz.*, Rs. 12. This will operate as a reduction in some cases, but in consequence of lands having now been discovered to be garden erroneously classed as dry-crop by the old survey, and of others then assessed at low rates on account of the neglected condition into which they had fallen, now being flourishing, and accordingly brought up to full rates, the increase in assessment on the whole táluka in garden lands amounts to 21·6 per cent. This is very moderate, and may be approved without hesitation.

7. On the whole, Government concur with the local officers that, looking to the vastly improved circumstances of the country during the course of the last 30 years, a larger enhancement of assessment would have been quite justifiable, but consider it advisable to sanction the present proposals in accordance with the policy of moderation which has characterised all the revision settlements.

Nothing could afford a more striking proof of the improved value of the material resources of the country than the one fact reported of an increase of the number of carts from 1,641 to 4,115, or 150 per cent. between 1844-45 and 1874-75, and there is little doubt that if, as is most probable, the Kárwár Railway is constructed, they will acquire, within the period for which this settlement will be fixed, a far higher value.

8. Before giving the proposed guarantee for the continuance of the settlements in all cases for 30 years, it will be advisable for Colonel Anderson to report whether it would not be better to give to the several villages, now included in different tálukas, the same term of guarantee as that given in the remaining villages of those tálukas.

9. The revision of assessment proposed in the 76th and 77th paragraphs for the village of Byáhatti of the Hubli Táluka is also sanctioned, and guaranteed for the remainder of the period of settlement fixed for that táluka.

10. Before imposing water-rates on Inám dry-crop lands watered from Government tanks, as proposed in paragraph 63, the Survey Commissioner and Collector should assure themselves of their legal position in the matter.

11. The thanks of His Excellency in Council should be communicated to Colonel Anderson for the careful and complete form in which he has placed these proposals before Government.

E. W. RAVENSCROFT,
Acting Chief Secretary to Government.

To

The REVENUE COMMISSIONER, S. D.,
The SURVEY and SETTLEMENT COMMISSIONER, S. D.,
The SURVEY and SETTLEMENT COMMISSIONER, N. D.,
The COLLECTOR of DHA'RWA'R.