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Revenue DEPARTMENT.

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GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

6th April 1881, No. 591.

READ THE FOLLOWING PAPER :—

No. 89. Proceedings of the Board of Revenue, dated 11th October 1880, No. 1,495.

Read the following letter from R. K. PUCKLE, Esq., Acting First Member of the Board of Revenue, in charge of the Settlement Department, to C. A. GALTON, Esq., Secretary to the Board of Revenue, dated Madras, 29th July 1880, No. 1,890-30 :—

Mr. Rundall's letter, No. 450-170, dated 14th June 1880, and an Appendix (to be returned).

I HAVE the honor to forward a scheme for the settlement of North Arcot.

2. Mr. Rundall has worked up details for the four taluks of Chandragiri, Chittoor, Gudiyátam and Wálajápet, and considers that if these are accepted the rates proposed may be introduced in the remaining five taluks of Palmanér, Arcot, Vellore, Wandiwash, and Pólúr without any further proposals.

3. Though the scheme now submitted applies to but 593 of the 1,453 ryotwari* villages of the district, yet the taluks dealt with are representative and contain every variety of soil and description of irrigation found in the district, while the commutation rate proposed has been worked up on averages for the entire district, and the cultivation expenses and other deductions apply equally to all the taluks.

*Excluding 65 jungle villages that have not been surveyed.

4. The original pymaish settlement was made in 1805 by Messrs. Græme and Ravenshaw on somewhat different data for the northern and southern taluks respectively, but in 1821 a uniform reduction of 2 annas in the rupee of assessment was made throughout the district, and in 1857 a further reduction approximating to 30 per cent. on wet and 15 per cent. on dry land was made by Mr. Banbury, who merged all the higher rates in a maximum of Rs. 8 an acre for wet and of Rs. 3 an acre for dry land. These maxima rates correspond to those now worked out by Mr. Rundall on entirely different data, but applying these rates to survey areas virtually raises them by 17 per cent. on dry land and 11 per cent. on wet.

5. The four taluks reported on were very imperfectly surveyed in the original pymaish of 1805, and Mr. Rundall finds that in Chandragiri and Chittoor the area in occupation is in dry one-fourth and in wet one-fifth in excess of what it has always been represented to be, but the excess is less in Wálajápet and still less in Gudiyátam. So imperfect is the pymaish however, and so greatly do some individual holdings vary in their actual as compared with their reported area, that Mr. Rundall is unable to adjust them rateably with regard to the area of the survey numbers in which they are situated, but has had to undertake the measurement of the inner holdings of those survey numbers in which a large percentage of error occurs. In the latter part of his report Mr. Rundall alludes to the possible necessity for thus measuring the greater part of the district, but the operation is costly and slow, and the necessity for apportioning increase of area in North Arcot with greater accuracy than in other districts is not very apparent. The system adopted elsewhere is to

apportion the increase of area found in a given survey number to the holdings A, B, C comprised in it, merely as a matter of account, making the total of these letters correspond with the total area of the survey number. In this there is no particular hardship. A man may lose a few cents in one number, but he may gain as much or more in another, and I have never heard a complaint in those districts where this has been done. Adjustment on paper moreover has the advantage of costing nothing, while Mr. Rundall estimates his system to cost about Rs. 3,600 in each taluk, and I doubt whether the settlement budget will be able to bear the charge.

6. The irrigation sources are numerous, and 96,203* acres are under wet cultivation in the four taluks reported on. The irrigation has been divided into four classes or groups, viz. :—

*Omitting the area held at special rates under ruined tanks and the well lands proposed to be transferred to dry.

(1) The best river-fed tanks under anicuts;
(2) River channels and ordinary channel-fed tanks and the best rain-fed tanks;
(3) Smaller rain-fed tanks and spring channels;
(4) Small, shallow, and indifferent tanks and drainage sources;

and each of the 2,061 sources has been separately considered. This is a far more laborious process than grouping large tracts of country with general reference to irrigation, soil, situation and circumstance, as has been usual in most districts, but Mr. Rundall has worked out the system adopted by him previously in Nellore, and Ganjam has been settled in this way. Its advantages are fully explained in paragraphs 49 to 55 and 111, 112 of the report; yet when vast areas have to be settled and the figures are freely rounded at every step in the process of arriving at the rates of assessment, it seems almost needless to descend below the unit of the village for grouping, the more especially as the five sub-divisions into which each class of soil has been divided allow of the fair classification of lands under inferior irrigation, even should the group in which that irrigation is placed be too high in particular instances. In the system that Mr. Rundall adopts the value of the inferior irrigation is relatively somewhat high, the difference proposed between the best river channel and the worst rain-fed tank in North Arcot being but a grade-and-a-half, instead of four full grades as is usual in most of the settlements.

7. In the enclosure of Board's Proceedings, No. 2,473, dated 28th August 1879, Mr. Wilson, the late Director of Revenue Settlement, urges that voluminous schemes, based on prolonged research into the circumstances of the districts remaining to be dealt with, are no longer needed, now that twenty-one such schemes have been submitted in the course of the last twenty-one years, and he thinks that the time has arrived to determine a standard table of rates for application in whole or in part to the districts that have yet to be settled.

8. To frame such a table Mr. Wilson reviews all the rates that have as yet been proposed, and, merging fractional differences, works out a scale between Rs. 12 and Annas 4 an acre graded by a system of grouping that provides for the highest rate of a lower group being identical with the second rate of the group preceding it, and so admits of the number of groups being prolonged to almost any extent. This he applies to a classification that provides for all the soils that could be met with in any or every district, and the Board have undertaken to review the proposal when disposing of this scheme for North Arcot. Mr. Wilson's table is given below :—

Name of Soils.	Classification. Class.	Classification. Sort.	Wet. Rate per Acre. First Group.	Second Group.	Third Group.	Fourth Group.	Fifth Group.	Dry. Rate per Acre. First Group.	Second Group.	Third Group.
1	2		3	4	5	6.	7	8	9	10	11
			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.
Permanently improved	IV	1	12 0 0	10 8 0	9 0 0	8 0 0	7 0 0	I	5 0 0	3 8 0	2 8 0
Do.	III	1	10 8 0	9 0 0	8 0 0	7 0 0	6 0 0	II	3 8 0	2 8 0	2 0 0
Do.	IV	2						III	2 8 0	2 0 0	1 8 0
Do.	VII	1						IV	2 0 0	1 8 0	1 0 0
Red loam	III	2						V	1 8 0	1 0 0	0 12 0
Black clay	IV	3						VI	1 0 0	0 12 0	0 8 0
Do. loam	V	1						VII	0 12 0	0 8 0	0 6 0
Do. sand	VI	2						VIII	0 8 0	0 6 0	0 4 0
Red clay	VII	1						XII	0 6 0	0 4 0	0 4 0
Do. loam	VIII	2									
Do. sand	XII	1									
Arenaceous loam	III	3									
Black clay	IV	4									
Do. loam	V	2									
Do. sand	VI	3									
Red clay	VII	2									
Do. loam	VIII	3									
Do. sand	XII	2									
Arenaceous loam	XIII	1									
Do.	XIV	4									
Do. sand	III	5									
Do.	IV	3									
Black clay	V	3									
Do. sand	VI	4									
Red clay	VII	3									
Do. loam	VIII	4									
Do. sand	XII	3									
Arenaceous loam	XIII	2									
Do.	XIV	5									
Do. sand	III	6									
Do.	IV	4									
Black clay	V	4									
Do. sand	VI	5									
Red clay	VII	4									
Do. loam	VIII	5									
Do. sand	XII	4									
Arenaceous loam	XIII	3									
Do.	XIV	6									
Do. sand	III	7									
Do.	IV	5									
Black sand	V	5									
Red clay	VII	5									
Do. sand	VIII	5									
Arenaceous loam	XIII	4									
Do.	XIV	7									
Do. sand	XIII	5									
Arenaceous sand	XIV	8									
Do.	XIV	9									

9. With such a table it would not be requisite to apply the highest rates in all districts, but omitting in one say the Rs. 12 rate, and in another perhaps the Rs. 12 and the Rs. 10-8-0 rates, to commence with the maximum found to be best suited to local requirements and to assess all the lands of a district in this and the inferior rates, foregoing the initiatory processes of experiments in yield, grain valuation of soils, determination of commutation prices, &c., by which such rates have been hitherto arrived at, Mr. Wilson proposed, in fact, to adopt a formula to save labor of calculation, but as this formula has not yet been sanctioned, Mr. Rundall has worked out his figures without it, and, in paragraph 180 of his report, objects to the use of Mr. Wilson's table on the ground that with it the settlement of a district would degenerate into a mere revision of rates of assessment. When, however, speaking of nice distinctions in prices, &c., he may have overlooked the fact that this table was intended for general application to the exclusion of a *quasi*-scientific mode of treatment, for which this country may be hardly prepared, and which is practically largely departed from at each step towards arriving at settlement rates.

10. What Mr. Rundall has done is well done, though the operation has occupied time, which, by Mr. Wilson's plan, would have been saved, and every year so saved would cheapen the process by about half a lakh of rupees. As explained above, however, Mr. Wilson's plan has not yet been sanctioned, and seeing that there are but three more districts to settle, it is not very material whether it is sanctioned or not. It is, however, in my opinion a very practical plan, and its adoption would have saved a large outlay had it been in use years ago.

Madura, South Arcot, and Bellary.

11. In working out therefore an alternative scheme for the irrigated lands of North Arcot, I endeavour to show further on the facility with which Mr. Wilson's table may be applied even to figures arrived at on entirely different data.

12. The soils of the four taluks reported on are in the proportion of one of black to three of red, the red sand tract comprising just about half the area. The fields have been classed in detail and checked by being thrown into blocks in the manner now always adopted. The small area under Government wells is said to be very good, the water being near the surface, the wells themselves being actually springs; this is classed in the exceptional rates for dry land, viz., Rs. 3-8-0, 3-0-0 and 2-8-0 an acre, but the bulk of the wells in these taluks are private property, and the land under them is assessed at the ordinary dry rates without any charge for the wells.

13. Mr. Rundall has taken *rice* (paddy), suzza (cumbu), ragi and ariga (varagu) as the staple crops. Cholum is only cultivated on 4 per cent. of the area while rice is grown on 160,000 acres, of which one-third is cultivated with a second crop, while the other three staples occupy 59 per cent. of the dry land under tillage; the total cultivated area of the district is about 555,000 acres.

14. The yield of the staple crops are estimated at from 1,200 to 590 Madras measures (2,760 to 1,357 lb.) per acre for rice (paddy), from 360 to 115 Madras measures (979 to 313 lb.) for suzza, from 390 to 120 Madras measures (1,100 to 338 lb.) for ragi, and from 480 to 140 Madras measures (1,296 to 378 lb.) for ariga. This estimate as compared with other districts gives the same maximum wet yield of rice as Godávari, Tinnevelly, Coimbatore, and part of Cuddapah, but varies for the dry grains, being less than Salem in suzza and ragi and less than Trichinopoly and Chingleput in ariga. On the whole the grain values are moderate, the actual *average* of 1,756 experiments being 1,159 Madras measures or 2,666 lb. per acre for unhusked rice, while the

The weights here given are those adopted by the Board of Revenue in their Standing Order, No. 290, viz., 2·30 lb. per Madras measure for paddy, 2·72 lb. for cumbu, 2·82 lb. for ragi, 2·70 lb. for ariga; these slightly differ from those adopted by Mr. Rundall.

result of 214 experiments in the very best soil gives an actual average of 1,479 Madras measures, or 3,402 lb. per acre.

15. In the dry grains the maxima values are almost identical with the best of the 262 experiments made, and may be freely accepted; for rice, however, 50 measures might be added to the figures worked out by Mr. Rundall, as the yield of the best soil is shown to exceed even 1,250 measures per acre. Taking therefore 1,250 as a maximum, the grain values that might be worked out are shown in juxtaposition with those that Mr. Rundall proposes.

$1\frac{1}{2}$ tons.

Taram.	Grain Values.	
	Proposed by Mr. Rundall.	Raised by 50 Measures.
	M. M.	M. M.
1	1,200	1,250
2	1,100	1,150
3	1,000	1,050
4	865	915
5	775	825
6	680	730
7	590	640

16. To convert the yield into money, Mr. Rundall has taken the average prices of 20 years from 1845 to 1864; as ordered by Government, he found, however, the returns for the decade from 1845 to 1854 to be somewhat unreliable for his purpose. The figures worked out are Rs. 95 per garce of 7,360 lb. for paddy and an average of Rs. 105, and a fraction for dry grains. The former figure is lower than that proposed for any district recently settled, being Rs. 5 below that for Salem, Rs. 10 below that for Chingleput, Rs. 12 below that for Nellore, and Rs. 31 below that for Cuddapah. It is true that North Arcot produces more grain than can be consumed in the district, but it has peculiar facilities of Railway communication by both the North-West and South-West Lines, and its produce should not, I think, be valued lower than that of the adjoining district of Salem, which is tapped by the South-West Line and the Bangalore Branch in a very similar manner. Mr. Rundall has allowed a deduction of 5 per cent. for the ryots' selling months, but in a district like North Arcot, with varying climates and elevations and with so many different descriptions of irrigation, the selling months are really almost all the months of the year, the more especially as 50,000 acres are cultivated with a second crop. This deduction may therefore be forgone, and Rs. 100 per garce may be fixed as the commutation rate for paddy.

Districts.	Commutation price per Garce of 3,200 Madras Measures or 7,360 lb.
	Rs.
Salem	100
Chingleput	105
Nellore	107
Cuddapah	126

17. The average for dry grains is a trifle above that for Salem, but less than that for Cuddapah and Chingleput. This may be accepted unchanged, and I do not propose any alteration in Mr. Rundall's scheme for the treatment of dry lands, which are dealt with by him in the manner usual in all the settlements yet made.

18. Mr. Rundall in paragraph 116 of his report mentions that "The lowest of the dry rates are rarely met with and must apply to a very limited extent. In many villages the rates do not descend below one rupee a cawny, or 12 annas an acre. The lowest dry rate now proposed is 6 annas an acre, and the incidence of the proposals as regards the lower rates shows that, notwithstanding the heavy excess in area determined by survey, the contemplated revision will lighten the assessment of the poorer soils and prove beneficial especially in respect to the large unoccupied waste area existing in most of the taluks." It may, however, be advantageous to provide a third group for those villages of the southern taluks in which a four-anna rate for poor gravelly uplands may possibly be required. This will not, however, in any way affect the figures of the taluks reported on.

Taram.	Cultivation Expenses per Acre.	
	Proposed by Mr. Rundall.	Raised by 5 per cent.
	Rs. A. P.	Rs. A. P.
1	12 3 0	12 12 9
2	11 15 6	12 9 1
3	11 5 5	11 14 6
4	9 15 11	10 7 11
5	9 5 0	9 12 5
6	8 8 0	8 14 10
7	8 0 0	8 6 5

Districts.	Cultivation Expenses per Acre.	
	Maximum.	Minimum.
	Rs. A. P.	Rs. A. P.
Chingleput	11 0 0	4 8 0
Salem	10 14 0	3 8 0
Coimbatore	13 2 10	4 12 10
North Arcot	12 12 9	8 6 5

Districts.	Cultivation Expenses per Acre.	
	Maximum.	Minimum.
	Rs. A. P.	Rs. A. P.
Chingleput	5 8 0	3 10 0
Salem	5 12 0	3 12 0
Coimbatore	3 6 4	2 3 4
North Arcot	4 1 4	2 7 4

19. If the commutation rate for unhusked rice is raised from Rs. 95 to Rs. 100, the expenses of wet cultivation as worked out by Mr. Rundall require modifying by 5 per cent. The maximum fixed is reasonable and does not differ greatly from that worked out for Chingleput, Salem, and Coimbatore. The minimum moreover is high, and on the whole the allowance is liberal.

20. For dry lands the allowance for cultivation expenses is less than in Chingleput or Salem, but rather more than in Coimbatore, and may, I think, be permitted to stand.

21. The money rates that Mr. Rundall arrives at range from Rs. 8 to Rs. 2 an acre for wet and from Rs. 3-8-0 to As. 6 an acre for dry land. Rs. 8 an acre seems somewhat low for the best-irrigated lands for North Arcot, which are shown to be specially good and to be very highly cultivated. A commutation rate of Rs. 100 per garce applied to a yield increased by 50 measures with cultivation expenses raised accordingly gives a net value, of which one half approximates very closely to Mr. Wilson's third-group rates :—

Primary Taram.	Outturn in Madras Measure as now assigned.	Value at Rs. 100 per Garce.	Deduct $\frac{1}{4}$th for Vicissitudes of Season and Unprofitable Areas measured into Fields.	Remaining Gross Value.	Deduct Cultivation Expenses.	Net Value.	Half Net.	Proposed Rates for First Group.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	1,250	39 1 0	7 13 0	31 4 0	12 12 9	18 7 3	9 3 7	9 0 0
2	1,150	35 15 0	7 3 0	28 12 0	12 9 1	16 2 11	8 1 5	8 0 0
3	1,050	32 13 0	6 9 0	26 4 0	11 14 6	14 5 6	7 2 9	7 0 0
4	915	28 9 6	5 11 6	22 14 0	10 7 11	12 6 1	6 3 0	6 0 0
5	825	25 12 6	5 2 6	20 10 0	9 12 5	10 13 7	5 6 9	5 0 0
6	730	22 13 0	4 9 0	18 4 0	8 14 10	9 5 2	4 10 7	4 8 0
7	640	20 0 0	4 0 0	16 0 0	8 6 5	7 9 7	3 12 9	4 0 0

22. In his letter enclosing his proposed standard table of rates, Mr. Wilson mentions that the best lands under the Pálár and Poiny rivers of North Arcot can as well bear the Rs. 12 and Rs. 10-8-0 rates as the Bhaváni channel lands of Coimbatore or the Támbraparni valley of Tinnevelly; but in paragraph 181 of his report, Mr. Rundall contends that the difference in the commutation rates proposed for Coimbatore and North Arcot (Rs. 126 and Rs. 95 per garce) are so considerable that the latter district could not bear the high assessment mentioned above. In

Tinnevelly, however, the commutation rate is almost identical (Rs. 105) with that proposed for North Arcot, and there higher rates of assessment have been freely applied, but, even omitting the Rs. 12 and Rs. 10-8-0 rates, there seems to be no reason why a Rs. 9 rate should not be applied to the best lands of North Arcot.

Class.	Mr Rundall's First-group Rates.	Mr. Wilson's Fourth-group Rates.	Mr. Wilson's Third-group Rates now proposed as a Maximum.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	8 0 0	8 0 0	9 0 0
2	7 0 0	7 0 0	8 0 0
3	6 0 0	6 0 0	7 0 0
4	5 4 0	5 0 0	6 0 0
5	4 8 0	4 8 0	5 0 0
6	3 12 0	4 0 0	4 8 0
7	3 0 0	3 8 0	4 0 0

23. Mr. Rundall's first-group rates run as shown in the margin and approximate very closely to the fourth group of Mr. Wilson's table, but the fourth group seems to be a trifle too low to commence with, and I have worked out a settlement made with the third and lower group rates of Mr. Wilson's table.

24. In his second, third, and fourth groups Mr. Rundall introduces intermediate rates peculiar to each group, and so departs from the simplicity of method of Mr. Wilson's table, which commences invariably one rate below the first rate of the previous group and maintains a uniform difference throughout. Mr. Rundall, in fact, does not lower his rates systematically, group by group, as in Mr. Wilson's table, but makes small differences of 8 or 4 annas instead of 1 rupee in the higher and 8 annas in the lower classes of each group. Mr. Rundall's method compresses a number of rates into four groups, with so little difference between them that, though his first group maximum is lower, his last group maximum is higher than in Mr. Wilson's table, while the existing system of grading the rates in North Arcot is said to be precisely that advocated by Mr. Wilson, for at page 95 of his Manual, Mr. Cox mentions that "in fixing the assessment the villages of each taluk were formed into three classes according as their distance from market towns affected the selling price of grain, and the lands in each village were classed under four or more divisions. The third-class land of a first-class village was considered to be equal to the second-class land of a second-class village and to the first-class land of a third-class village. The same rule of progression continued throughout the classes."

25. The following statement exhibits these tables in juxtaposition :—

Class.	Mr. Rundall's Proposed Rates for four Irrigated Groups.				Mr. Wilson's Proposed Rates for four Irrigated Groups.			
	First Group.	Second Group.	Third Group.	Fourth Group.	Third Group.	Fourth Group.	Fifth Group.	Sixth Group.
	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	8 0 0	7 8 0	7 0 0	6 8 0	9 0 0	8 0 0	7 0 0	6 0 0
2	7 0 0	6 8 0	6 0 0	5 8 0	8 0 0	7 0 0	6 0 0	5 0 0
3	6 0 0	5 8 0	5 0 0	4 8 0	7 0 0	6 0 0	5 0 0	4 8 0
4	5 4 0	4 12 0	4 4 0	3 12 0	6 0 0	5 0 0	4 8 0	4 0 0
5	4 8 0	4 0 0	3 8 0	3 0 0	5 0 0	4 8 0	4 0 0	3 8 0
6	3 12 0	3 4 0	3 0 0	2 8 0	4 8 0	4 0 0	3 8 0	3 0 0
7	3 0 0	2 8 0	2 8 0	2 0 0	4 0 0	3 8 0	3 0 0	2 8 0

26. Mr. Rundall's dry rates differ so little* from those given in Mr. Wilson's table that no alteration is proposed, but the existence of the similarity goes far to prove the advantage of adopting a formula

* 8 Pies in the rupee of assessment when applied to the survey area.

to save years of patient labor. The Rs. 3-8-0 rate applies solely to lands under Government wells, the maximum *bonâ fide* dry rate commencing at Rs. 3. The rates proposed when applied to the survey area result in an increase of revenue of 3 per cent. The increase of area by survey is, however, 17 per cent., so the dry lands benefit largely, though the total increase of revenue on them is Rs. 6,860.

27. Mr. Rundall proposes an increase of Rs. 73,884, or 17 per cent. in the single-crop charge on wet lands, but the increase of area by survey is 11 per cent., and a net increase of 6 per cent. in the charge on the wet lands of the district may be thought to be hardly sufficient, and Mr. Rundall, in paragraph 119 of his report, when alluding to Mr. Bourdillon's desire that Rs. 8 might be the highest rate in the revision of 1857, mentions that "it is hardly likely that even Mr. Bourdillon would have regarded a slightly higher rate as undesirable under circumstances so advantageous to the villages and lands benefited by the irrigation" of the Pálár and Poiny channels which have been greatly improved at the cost of the State since 1857. Mr. Cox, too, writes at page 120 of his Manual:—

"The enormous rise in the value of agricultural produce since the revision of 1857 has made the assessments of the district comparatively light, and an enhancement of the demand would probably now have little effect upon the area of land cultivated. Some of the poor soils, which are really not worth the trouble of cultivation, might be relinquished, but the revenue derived from them is insignificant, and the ryots could afford to pay higher assessments, and yet derive large profit from their labor. In the settled estates the amounts paid by the cultivators without difficulty are enormously in excess of those demanded for precisely similar lands in Government taluks."

28. Under these circumstances, I cannot think that the alternative scale (which raises the single-crop charge on the wet lands of these four taluks by Rs. 38,868 above the figure that Mr. Rundall proposes, or by a total of Rs. 1,12,758 above the present assessment) is too high, especially if the second-crop charge is compounded at one-third, one-fourth, or one-fifth of the single-crop rates under all the inferior sources.

29. The following table exhibits the area and assessment under each money rate of Mr. Rundall's and of the alternative scheme compared with the present revenue.

Omitting the area held at special rates under ruined tanks and the well lands proposed to be transferred to dry.

The reason why similar rates in Column 1 appear bracketed opposite to different rates in Column 4 in some instances is that Mr. Rundall's system of grouping gives the Rs. 6-8-0 rate for instance as the second taram of the second group and the first taram of the fourth group, whereas the alternative scheme gives Rs. 7 as the second taram of the second group and 6 as the first of the fourth group; hence the area under Rs. 6-8-0 in the one case is included in the Rs. 7 rate and in the other in the Rs. 6 rate.

As per Mr. Rundall's Scheme.			As per Alternative Scheme.		Jammabandi Assessment.
Rate	Area.	Assessment.	Rate.	Assessment.	
RS. A. P.	ACRES	RS.	RS. A. P.	RS.	RS.
8 0 0	221	1,768	9 0 0	1,989	1,189
7 0 0	1,654	11,578	...	...	9,044
7 8 0	1,853	13,898	...	...	10,504
	3,507	25,476	8 0 0	28,056	19,548
6 0 0	4,509	27,054	...	...	21,739
6 8 0	12,350	80,275	...	...	66,097
7 0 0	257	1,799	...	...	1,266
	17,116	1,09,128	7 0 0	1,19,812	89,102
5 4 0	4,554	23,909	...	...	19,275
5 8 0	18,163	99,897	...	...	88,239
6 0 0	4,927	29,562	...	...	23,378
6 8 0	26	169	...	...	113
	27,670	1,53,537	6 0 0	1,66,020	1,31,005
4 8 0	2,635	11,858	...	...	9,603
4 12 0	13,390	63,603	...	...	57,484
5 0 0	9,386	46,930	...	...	40,005
5 8 0	874	4,807	...	...	3,822
	26,285	1,27,198	5 0 0	1,31,425	1,10,914
3 12 0	903	3,386	...	...	2,742
4 0 0	6,145	24,580	...	...	22,564
4 4 0	7,059	30,001	...	...	26,615
4 8 0	1,411	6,350	...	...	5,226
	15,518	64,317	4 8 0	69,831	57,147
3 0 0	122	366	...	...	349
3 4 0	1,296	4,212	...	...	4,127
3 8 0	1,905	6,668	...	...	5,739
3 12 0	1,177	4,414	...	...	3,827
	4,500	15,660	4 0 0	18,000	14,042
2 8 0	254	635	...	...	872
3 0 0	907	2,721	...	...	2,457
	1,161	3,356	3 8 0	4,064	3,329
2 8 0	191	478	3 0 0	573	454
2 0 0	34	68	2 8 0	84	122
Total ...	96,203	5,00,986	...	5,39,854	4,26,852

30. There will be much adjustment of these figures moreover on hearing appeals and by transfers from dry to wet and from wet to dry, and the usual abatement of one rupee an acre for baling will have to be made at the settlement.

31. As regards second crop, Mr. Rundall, in paragraph 155, apparently bases his figures on the supposition that all existing permanent double crop should be charged at half additional to the single-crop rates, but it will be quite sufficient, I

think, to charge a half rate on large tracts of unfailing double-crop land under first-class sources of supply, compounding the area under inferior sources at one-third, one-fourth, or one-fifth according to circumstances. This is in conformity with the spirit of G.O., No. 880, dated 14th July 1874, and is the course that has been adopted in the settlement of most other districts.

32. The assessment of these four taluks is Rs. 6,98,550, which Mr. Rundall proposes to raise by a lakh of rupees, or by 15 per cent., which is the exact equivalent of the increase of area by survey. If the alternative scheme for wet lands is adopted, the increase of assessment will be half a lakh more, viz., Rs. 38,868 in first crop and a ratable increase in second crop, the result of which will be an increase of about 6 per cent. on Mr. Rundall's proposals. That the district can well bear the charge is obvious when it is mentioned that the Board's returns for the last two years show the average price of paddy in North Arcot to be Rs. 194 per garce, which is double the commutation rate proposed.

33. Mr. Rundall points out the unevenness of the present assessment in paragraph 167, and mentions that many villages are still rated excessively, while others are extraordinarily lowly assessed; he thinks that the reduction of 1857 on the lower class of dry soil was inadequate. This, the scheme, now submitted, rectifies, for, though no rate is proposed under 6 annas while the existing rates go down to 2 annas an acre, the area in the lower rates is nominal, while Mr. Rundall has classed 20,604 acres at 8 annas and 1,797 acres at 6 annas an acre, and the application of all his rates from 1 rupee and under tends to reduce the present assessment as shown in paragraph 165.

34. In paragraph 173, Mr. Rundall reports the more ordinary tanks, especially in the Wálajápet Taluk, to be in a very dilapidated condition, and considers the projected improvements of the irrigation on the left bank of the Pálár likely to be a great boon to many villages, now only nominally supplied from the river. This latter scheme is in the hands of the Public Works Department, and it is uncertain when circumstances will admit of its being carried into execution, but the ordinary tanks of the district have recently been made over to the Collector, and their maintenance will be provided for under rules laid down in G.O., No. 281-I, dated 5th May 1880. These rules in fact apply the Dasabandam system, which Mr. Rundall so strongly advocates to all the minor works, with this material difference that, whereas under the Dasabandam system, the remission is permanent, whether repairs are executed or not; in this case the remission will only be made for work done and approved by the Collector.

35. The question as to whether any considerable increase of assessment by settlement shall be levied from individuals by annual increments has been referred for the orders of Government in connection with the scheme for the revision of assessment in the Sub-division Taluks of Cuddapah. On this point Mr. Rundall differs from Mr. Cox, who would discontinue this mode of treatment which is undoubtedly troublesome to the Revenue officers and very uncertain in its incidence, but orders will probably be received before this report reaches the Board.

36. Mr. Rundall has made no proposal for the allotment of grazing ground for the use of the villagers. Such allotment can, however, be made at the settlement in communication with the Collector under the general sanction conveyed in G.O., No. 341, dated 8th March 1876.

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REVENUE SETTLEMENT OFFICE,
Chittoor,
12th August 1880.

(Signed) C. RUNDALL,
Deputy Director of Rev. Sett.

From C. RUNDALL, Esq., Deputy Director of Revenue Settlement, No. III, North Arcot, to R. K. PUCKLE, Esq., Acting First Member, Board of Revenue, in charge of Revenue Settlement Department, Madras, dated Chittoor, 14th June 1880, No. 450-170.

I HAVE the honor to forward proposals for the settlement of the Chandragiri, Chittoor, Gudiyátam and Wálajápet Taluks of the North Arcot District. These form a portion of the main and sub-division of the district, and have been selected as representative taluks, with the view of the rates of assessment framed being extended to the other taluks, viz., Palmanér, Arcot, Vellore, Wandiwash, and Pólúr.

2. By the memorandum printed with G.O., No. 575, of 11th April 1878, it is required that the scheme to be submitted by me for this district should be as brief as possible, and consequently much of the information usually afforded in Settlement Reports must be dispensed with to conform to this requisition, and necessarily the past Revenue history of the district must be excluded, or at all events very briefly referred to; for, in framing proposals to supersede the existing assessments, the past can hardly be altogether ignored in the report.

3. The omission of the Revenue history of the district in detail is, however, comparatively of little consequence, as it has been lately written for the District Manual by Mr. A. F. Cox, the Head Assistant Collector, and is now passing through the Press; and, with the view that it may be available as thus compiled, I have, with Mr. Cox's permission, requested that a few copies may be separately struck off and attached to this report for ready reference. If this history is consulted, it will be seen that, as originally constituted, on the cession of the Carnatic, the North Arcot District comprised the present five taluks, to the north of the Pálár river, and also the Krishnagiri Division of the Baramahal portion of Salem, and the Venkatagiri and Sydapur Zemindaris of the Nellore District. In 1808 these latter were transferred to the Salem and Nellore Collectorates, and the North Arcot District was reconstructed by the addition from the southern division of Arcot of the present Vellore, Arcot, Wandiwash and Pólúr Taluks, as also the Arni Jaghire. The original survey or pymaish of the district, commenced in 1801-02, was conducted by Mr. Græme for the taluks north of the Pálár and subsequently by Mr. Ravenshaw for those south of the Pálár; the latter being settled in the first instance along with the existing taluks of the South Arcot District to which they then appertained. It thus follows that the former survey or pymaish of the taluks north and south of the Pálár varied in several important features. The basis of the settlement in both districts was an equal division of the crop after making certain deductions. In South Arcot the Mera or Sotantrums due under the old Hindu system to the Village Merahsidars were almost wholly resumed for nunjah or wet lands by Mr. Ravenshaw, and similarly about half for punjah or dry lands, whilst Mr. Græme, in his settlement of the taluks north of the Pálár, included the Mera in the ryot's share.* The estimated produce and rate of commuting the same into money varied considerably as will be hereafter shown; but in either Collectorates varying rates of commutation were adjusted to different localities.

* *Vide* Mr. Cox's Manual.

Paragraph 80.

4. The chief variation of these assessments was in dealing with the charge for double or at second crop in wet lands. Whilst Mr. Græme assessed part of the land of the northern taluks at a consolidated double-crop assessment, and part at single-crop rates; in Mr. Ravenshaw's assessment for South Arcot the gross produce was considered, whether from one or two crops, and the Government share thereof converted into a money assessment, which has been regarded ever since to include any charge for second crop, the ryot being "at liberty to cultivate what number and description of crops he chose" in wet assessed land without further charge. As now adjusted in the taluks north of the Pálár, the prevailing double-crop rates of assessment are 50 per cent., or one half in excess of the single-crop charge. It is thus practicable to determine the actual incidence of the charge for either the first or the second crop; and when the supply of irrigation may fail for the second crop, one-third of the consolidated double-crop assessment is remitted. For the taluks south of the Pálár it is impracticable to similarly eliminate the actual incidence for the first or single-crop assessment, and no claim for any remission is allowed unless the supply may have failed altogether to suffice for the irrigation of the land, and it may have been waste from this cause for the whole year.

South Arcot Manual, page 277.

5. The district passed through the several phases of triennial and decennial leases—Faslis 1218 to 1220 and 1221 to 1230 respectively. On the termination of the latter leases, a ryotwari settlement was again introduced, and the assessments proving excessive and detrimental to the prosperity of the district, a uniform reduction was sanctioned and put in force in Fasli 1232 at 12½ per cent., or 2 annas on every rupee of assessment. But even this had not the desired effect of extending cultivation and improving the condition of the people; and, after various proposals, and an attempt to resurvey the district, which was abandoned after being undertaken throughout several hundred villages, the mode in which conducted being disapproved, the whole question was reported on by Mr. Bourdillon, and definite proposals for a general revision

of the prevailing rates of assessment were submitted to the Board of Revenue on the 23rd October 1854. Mr. Bourdillon recommended that Rs. 10 should be taken as the highest wet rate per cawny for single crop, and that 30 per cent. reduction should be made in wet and 15 per cent. in dry assessment throughout the district. These proposals were accepted and sanctioned by Government, and in 1855 Mr. George Banbury was appointed as an Additional Sub-Collector to give effect to the reductions.

6. A table of wet rates starting from Rs. 10 per cawny, and descending by As. 8 to Rs. 6, and then by As. 4 to Rs. 2, was framed for the northern taluks; and the formerly prevailing rates were merged therein according to a published table, so as to provide the alleviation deemed requisite in each case. The highest former wet rate for single crop appears to have been Rs. 19-14-6 per cawny; this and all other rates in excess of Rs. 18 were merged under the new rate of Rs. 10. Similarly rates between Rs. 16-8-0 and Rs. 18 were merged with Rs. 9-8-0, and between Rs. 15 and 16-8-0 under Rs. 9. These rates refer to the Chittoor Taluk, and the tables, so far as the merging of the old rates were concerned, varied slightly in different localities. For the lower rates the scale of reduction was much more moderate and rarely exceeded 8 annas.

7. In the southern taluks Mr. Banbury found it impossible to separately rate double and single-crop irrigation, and the single charge for either one or two crops as existing since the pymaish had to be perpetuated. Rs. 15 per cawny was fixed as the highest rate including the charge for second crop, the rates descending by Rs.——to Rs. 10, and then according to the table of the northern taluks. I give below a few examples of the reduction thus effected :—

Taram.	From	To	Rate.
	RS. A. P.	RS. A. P.	RS. A. P.
1	35 0 0	28 2 8	15 0 0
4	22 3 8	19 4 5	12 0 0
7	15 5 0	13 0 9	9 8 0
16	6 13 5	6 8 7	5 8 0
26	3 9 3	3 4 6	3 00

8. The dry lands were treated in the same manner, being arranged for both portions of the district under 37 rates, rising from As. 3 to Rs. 4 as regards purely dry land. There were three higher punja rates applicable only to garden lands irrigated by baling. The rates will be found in detail at paragraph 115.

9. The decrease in the Revenue demand foregone by this extensive revision of the rates of assessment amounted for wet to Rs. 3,42,794, and for dry to Rs. 1,28,868, or altogether Rs. 4,71,662 according to the Manual; but I am unable to reconcile these figures with a return made by Mr. Banbury in 1864 when Acting Collector of the district. In the Jamabandi report for 1863-64 Mr. Banbury remarked, paragraph 22—"I may here say a few words regarding the effect of the revision of assessment. Mr Reade in his administration report showed the result for South Arcot, and I annex a similar statement for this district.

North Arcot.

							RS.
Average of ten years from Faslis 1257 to 1266						...	16,47,011
Fasli 1267 in which reduction of assessment was effected.						...	13,74,418
„ 1268 ...	...	...	...	...	...	...	16,16,777
„ 1269 ...	...	...	...	...	...	...	17,32,684
„ 1270 ...	...	...	...	...	...	...	15,73,990
„ 1271 ...	...	...	...	...	...	...	16,05,615
„ 1272 ...	...	...	...	...	...	...	16,80,701
„ 1273 ...	...	...	...	...	...	...	16,81,823

"Rs. 40,000 have added to the land revenue of this district since the revision by the transfer of villages from adjoining zillahs; deducting this it is found that only in one fasli has the revised beriz exceeded the average of the ten years prior to the introduction of the measures for improvement and alleviation" * * * * "However, a series of a diverse season is alleged as the cause for this comparatively less gratifying result of Mr. Burdillon's labors and well-considered schemes for the benefit of this province in which he took so deep an interest."

10. By the foregoing the revenue of Fasli 1267 was Rs. 2,42,359 below the average of the ten years preceding the revision. The net reduction cannot be gathered from these details. In the Jamabandi Report of 1857-58 a comparison is instituted between the demand, &c., of Fasli 1266, they are before the revision, and 1267, the year in which it was given effect to. From this it would appear that, notwithstanding an increase in occupation of 54,634 acres during

Fasli 1267, the assessment of the lands under occupancy was no less than Rs. 5,48,579 below the demand of Fasli 1266, as marginally detailed. As, however, very extensive general remissions had been allowed in the preceding years, amounting to Rs. 3,14,108 for Fasli 1266, and the necessity for such general remission ceased with the revision of assessment given effect in Fasli 1267, the whole of the Rs. 5,48,579 can hardly be regarded as assessment foregone by the revision; for had it not been for the revision of assessment the general remissions allowed during several years would have had to be continued.

Faslis.	UNDER OCCUPANCY.	
	Acres.	Assessment.
		RS.
1266	484,027	20,74,373
1267	538,663	15,25,794
Total ..	— 54,636	— 5,48,579

11. Mr. Banbury's extract given above seemingly refers to the net revenue of each year, and therefore more accurately represents the reduction actually occasioned by the revision. That the subsequent growth of the land revenue of the district may be apparent particulars are tabulated below for the five years preceding the revision, and for succeeding years, or from Faslis 1262 to 1287 (1852-53 to 1877-78):—

REVENUE FROM 1852-53 to 1877-78 (26 YEARS.)

Years and Faslis.				DEMAND.		Remissions.	Demand less Remissions—Columns 3 and 4.
				Wet and Dry only.	Including Second Crop and Water-rate.		
1				2	3	4	5
				RS.	RS.	RS.	RS.
1852-53	...	...	1262 ...	18,26,118	19,01,319	2,83,622	16,17,697
1853-54	...	...	1263 ...	15,76,304	16,33,041	4,57,318	11,75,723
1854-55	...	...	1264 ...	16,63,984	17,37,018	4,21,914	13,15,104
1855-56	...	...	1265 ...	18,54,580	19,19,643	4,62,002	14,57,641
1856-57	...	...	1266 ...	20,74,372	21,76,757	4,85,624	16,91,133
Average	...	...	...	17,99,074	18,73,556	4,22,096	14,51,460
1857-58	...	...	1267 ...	15,25,794	15,89,625	2,93,868	12,95,757
1858-59	...	...	1268 ...	15,50,143	16,41,743	1,24,401	15,17,342
1859-60	...	...	1269 ...	16,52,919	17,42,350	1,09,314	16,33,036
1860-61	...	...	1270 ...	16,13,479	16,67,979	1,92,111	14,75,863
1861-62	...	...	1271 ...	16,40,124	17,01,087	1,95,429	15,05,658
1862-63	...	...	1272 ...	16,84,733	17,51,351	1,79,601	15,71,750
1863-64	...	...	1273 ...	17,17,603	17,82,369	2,07,669	15,74,700
1864-65	...	...	1274 ...	18,00,504	18,80,890	1,32,921	17,47,969
1865-66	...	...	1275 ...	18,20,780	19,04,958	2,07,408	16,97,550
1866-67	...	...	1276 ...	17,62,484	18,62,984	1,33,967	17,29,017
1867-68	...	...	1277 ...	18,01,944	18,55,066	5,97,711	12,57,355
1868-69	...	...	1278 ...	18,22,948	18,85,687	4,80,717	14,04,970
1869-70	...	...	1279 ...	18,59,313	19,28,631	2,87,205	16,41,426
1870-71	...	...	1280 ...	18,67,222	19,74,808	1,15,751	18,59,057
1871-72	...	...	1281 ...	18,48,393	19,70,323	1,15,330	18,54,993
1872-73	...	...	1282 ...	18,02,236	19,78,325	1,29,804	18,48,521
1873-74	...	...	1283 ...	17,70,138	19,01,590	2,09,286	16,92,304
1874-75	...	...	1284 ...	17,98,505	20,22,024	1,17,666	19,04,358
1875-76	...	...	1285 ...	17,92,966	18,92,917	2,69,317	16,23,600
Average	...	...	...	17,43,801	18,38,669	2,15,762	16,22,907
1876-77	...	...	1286 ...	17,89,473	18,30,159	6,36,226	11,93,933
1877-78	...	...	1287 ...	17,94,185	18,98,649	2,10,626	16,88,023
Average	...	..	...	17,91,829	18,64,404	4,23,426	14,40,978
Average	...	...	1267 to 1287	17,61,233	18,41,120	2,35,539	16,05,581

12. Column 5 of the statement shows the demand less remissions to have averaged Rs. 14,51,460 during the five years preceding the revision of the rates of assessment; that the reductions then made and ordinary remissions allowed on account of failure of the season placed the revenue of 1857-58 at Rs. 12,95,757; that it rose next year to Rs. 15,17,342, or above the average of the five years preceding the revision; and that ever since except in 1867-68 and 1868-69, seasons of considerable scarcity, the revenue has with various fluctuations been more or less in excess of the average of the five years specified down to 1875-76, the year before the famine. The average for the nineteen years, from 1857-58 to 1875-76, amounts to Rs. 16,22,907, including the two years of scarcity alluded to, or Rs. 1,71,447 above the average of the five years prior to the revision. In 1874-75, the assessment amounted to Rs. 19,04,358. It is thus evident that the diminution in the demand, due to the reduction of the rates of assessment throughout the district, was very soon recouped by the extension of cultivation.

13. *Explanation of delay in framing and submitting these Proposals.*—A reference to the Memorandum which accompanied the Director's letter to Government, No. 573-7, dated the 18th March 1878, will show that the scheme to be prepared was intended to comprise the Telugu Taluks classified at that time—Chandragiri, Chittoor, and Gudiyátam. On resuming work in the district on my return from furlough in September 1878, I found that it was first necessary to revise the classification of the Chandragiri and Chittoor Taluks to the present standard of five sorts under each class, according to which the classification of Gudiyátam had been conducted. I further deemed it essential, as the scheme to be framed was required to be so arranged as to admit of its extension to the Tamil Taluks of the district, that it should comprise as well one of the anicut-irrigated taluks, and proposed to Mr. Wilson, with this view, that classification should be extended to the Wálajápet Taluk, irrigated to a great extent from the Pálár and Ponna anicuts. This course was approved by the Director: and inasmuch as the survey areas of the Chittoor Taluk could not be wholly furnished until the end of October 1879, but little delay in submitting the scheme has really been occasioned by extending classification to Wálajápet, and including that taluk, the largest and most important in the district, in the present proposals; for the survey maps and areas were then available as it was one of the first taluks surveyed. The classification of the Chandragiri and Chittoor Taluks was thoroughly revised by the classifiers on the basis of five sorts under each taram or class of soil and uniformity with Gudiyátam thus secured. The whole of each village was gone over, and this revision has been extensively tested by examination. The Wálajápet Taluk was commenced during December 1878, and by August 1879 the classification had been completed by classifiers. It was not, however, until January that the final examination of the classification conducted for the most part by Mr. Clerk, had been closed.

G.O., No. 575, of 11th April 1878.

Proceedings, No. 2,638-268, dated 23rd October 1878.

14. Under date the 18th January 1879, I was requested by the Director, Mr. Wilson, under orders from Government, to arrange for the classification of the villages benefited by irrigation from the Pálár anicut. A part of the tract was then under operation in Wálajápet, and on the completion of the whole taluk the field party moved across the Pálár, and took up and classified the villages of Arcot supplied from the same anicut. The present report is, however, limited to the irrigation in the Wálajápet Taluk, or on the northern bank of the Pálár. The tract of villages to the south of the river in the Arcot Taluk will be worked up separately on the basis of the proposals now made, and furnished shortly as a sequel to this report; and the results of the revision of assessment for the whole of the villages commanded by the Pálár irrigation will then be communicated.

15. *Details of Villages.*—The villages of each taluk of the district by the Revenue accounts and by survey are enumerated in the subjoined form according to tenure—Government, Inam and Zemin, &c., including Jaghire or Izara villages :—

DETAILS OF VILLAGES.

Taluks.	By Revenue Accounts.				By Survey.				Villages excluded from Survey.
	Government.	Inam.	Zemindari, &c.	Total.	Government.	Inam.	Zemindari, &c.	Total.	Government.
Chandragiri	188	44	..	232	53	44	..	97	..
Chittoor	461	21	2	484	135	21	2	158	2
Palmanér	254	6	..	260	31	6	..	37	61
Gudiyátam	264	2	..	266	173	2	..	175	..
Wálajápet	290	14	6	310	232	14	6	252	..
Vellore	191	2	..	193	135	2	..	137	..
Arcot	346	6	2	354	253	6	2	261	1
Pólúr	229	1	..	230	160	1	..	161	1
Wandiwash	420	4	..	424	281	4	..	285	..
Total ..	2,643	100	10	2,753	1,453	100	10	1,563	65

16. The Government villages number 2,952, of which 309 have been excluded from demarcation and survey, leaving 2,643 actually surveyed. These were amalgamated at the demarcation and surveyed under 1,453 villages, and will be so constituted at settlement. Many of the existing Revenue villages are practically hamlets; groups of villages termed payakats having to a greater or less extent the same village officers. In some instances hamlets had been converted into separate villages, many of very insignificant extent and revenue, in comparatively recent years 1858-59. This re-arrangement of villages was duly sanctioned during the progress of demarcation operations, and will greatly facilitate the Revenue administration of the district subsequent to settlement. At paragraph 65 of his report, No. 127, of 23rd October 1854, already alluded to, Mr. Bourdillon pointed out the necessity of this reform. In most of the payakats or groups of villages the sources of irrigation and grazing rights of the hills and forests are common either to some or to the whole of the villages comprising the payakat, and the communal rights as to pasturage could not be separated at the demarcation.

17. The sixty-five villages as amalgamated and excluded from survey comprise 309 Revenue villages by the existing accounts. The two villages of Chittoor are situated amongst the hills bordering Palmanér, and the villages of the latter form the southern and western portion of that taluk. The tract is very hilly and more or less dense jungle, difficult of access for survey or other purposes, and the villages generally are very insignificant and scattered over a large area. The limited cultivation is, moreover, to some extent liable to change as regards locality. The villages of Vellore and Pólúr are situated on the Javvadi hills forming the boundary with Salem.

Chittoor	2
Palmanér	305
Vellore	1
Pólúr	1
Total ..	309

18. The villages held under tenure other than Inam are particularized below :—

Taluks.	Villages.		
	Zemin.	Jaghire.	Izara.
Chitoor ...	...	...	2
Wálajápet ...	4	...	2
Arcot	...	2	...
Total ...	4	2	4

19. *Demarcation.*—The Chandragiri, Chittoor, Gudiyátam, and Palmanér Taluks were demarcated for survey by the Settlement Department, whilst the remaining five taluks of the district were demarcated by the survey. The demarcation was uniformly conducted in all taluks, stones of the same dimensions being used throughout for marking the boundaries and divisions of villages, and for defining the limits of survey fields. The villages of the Chandragiri Taluk and the northern villages of Chittoor were demarcated by holdings in conformity with G.O., No. 754, of 28th April 1871, each holding, however small, being separately marked.

20. *Survey.*—The survey of the district commenced in 1872-73, was completed during 1879, and by the close of 1879-80 the survey area lists for all villages of the district had been furnished to this department.

21. *Comparison of Survey with Revenue Areas for four Taluks.*—Although the survey areas have been supplied for all taluks, a detailed comparison as has yet only been worked out for the four taluks to which this report relates. The total and talukwar results may be observed from the following statement :—

COMPARISON OF REVENUE AND SURVEY AREAS—ACRES.

Taluks.	Dry or Wet.	Government Area. Occupied. Revenue.	Government Area. Occupied. Survey.	Government Area. Occupied. Percentage.	Government Area. Unoccupied. Revenue.	Government Area. Unoccupied. Survey.	Government Area. Unoccupied. Percentage.	Inam Area. Revenue.	Inam Area. Survey.	Inam Area. Percentage.	Poramboke Area. Revenue.	Poramboke Area. Survey.	Poramboke Area. Percentage.	Total Area. Revenue.	Total Area. Survey.	Total Area. Percentage.
Chandragiri	Dry	12,851	16,374	+ 27	12,921	12,967	.. 6	11,263	12,562	++ 11	148,486	154,097	+ 3	195,399	207,445	+ 6
	Wet	4,815	5,763	+ 20	1,080	1,150	+ 1	3,983	4,642	+ 14						
		17,666	22,137	+ 25	14,001	14,117	+ 1	15,246	17,094	+ 12						
Chittoor	Dry	56,176	71,441	+ 27	41,426	41,089	— 1	16,474	18,120	++ 10	207,940	138,382	— 33	348,987	299,429	— 14
	Wet	15,852	18,906	+ 19	3,355	2,846	— 15	7,764	8,646	+ 11						
		72,028	90,346	+ 25	44,781	43,935	— 2	24,238	26,766	+ 10						
Gudiyátam	Dry	66,223	73,000	+ 10	28,800	26,790	— 7	13,166	13,856	++ 5	146,640	144,132	— 2	281,164	285,341	+ 1
	Wet	18,581	20,068	+ 8	3,404	3,029	— 11	4,340	4,626	+ 6						
		84,804	93,008	+ 10	32,204	29,819	— 7	17,506	18,382	+ 5						
Wálajápet	Dry	70,469	79,594	+ 13	59,569	58,754	— 1	9,280	9,803	++ 6	87,342	74,165	— 15	287,163	287,063	..
	Wet	47,956	52,065	+ 9	5,774	5,268	— 9	6,762	7,414	+ 10						
		118,425	131,659	+ 10	65,343	64,022	— 2	16,042	17,217	+ 7						
Total	Dry	205,719	240,409	+ 17	142,716	139,600	— 2	50,183	54,331	++ 8	590,408	510,776	— 13	1,112,692	1,079,278	— 3
	Wet	87,204	96,741	++ 11	13,613	12,293	— 10	22,849	23,128	+ 1						
		292,923	337,150	+ 15	156,329	151,893	— 3	73,032	79,459	+ 9						

22. The survey determine for the four taluks a deficiency of 3 per cent. on the ayacut or Revenue area. Each taluk varies considerably—Chandragiri and Gudiyátam exhibit an increase by survey of 6 and 1 per cent. respectively; Chittoor a decrease of 14 per cent., whilst for Wálajápet the survey and Revenue area almost exactly coincide. As regards the occupied, unoccupied, and Inam area very diverse results are apparent for each of the heads specified and for the taluks likewise. On the whole the area in occupation by survey is 15 per cent. in excess of the Revenue area, 17 in dry and 11 in wet, and the unoccupied area is similarly 2 per cent. less, 2 in dry and 10 in wet; whilst the Inam area is 9 per cent. in excess, 8 in dry and 10 in wet. The Poramboke area including lands set apart for public purposes, and jungle waste, hills, &c., indicates a deficiency by survey equivalent to 13 per cent. There is thus more or less increase by survey in the occupied and Inam area of each taluk, and a decrease in the unoccupied and Poramboke area. The variation needs mainly to be attributed to defects in the original pymash or survey, which have been acknowledged to exist for years. Mr. Bourdillon in his report to the Board, No 127, dated 23rd October 1854, already referred to, observes at paragraph 34 that the northern taluks particularly were "very imperfectly surveyed in 1805."

23. There can be little doubt that the area of hills and forest tracts were often more or less approximately rendered; and the uniform deficiency on the unoccupied or waste area, and excess on that in occupation, would point to the waste area having been considerably encroached on since the pymaish. The increase is greatest in the Chandragiri and Chittoor Taluks, being no less than 27 per cent. throughout the dry land held on putta in each taluk, and 20 and 19 per cent. respectively for the wet holdings. In Gudiyátam the enhancement on the Revenue area is only 10 and 8 per cent. respectively for dry and wet, and in Wálajápet similarly 13 and 9 per cent.

24. Whilst there is an excess by survey for both wet and dry in respect to each taluk the same disparity that is apparent between the taluks is observable as regards the villages of each taluk when examined. The marginal abstract indicates the number of villages in which either the dry or wet occupied area may exhibit a deficit by survey.

AREA IN OCCUPATION.

Taluks.	Number of Villages with a deficiency of Area by Survey. Dry.	Wet
Chandragiri	..	1
Chittoor	..	2
Gudiyátam	19	18
Wálajápet	10	20
Total ..	29	41

No. 408-164, dated 22nd July 1879.

25. The discrepancies in area noticeable in respect to villages exist between the different holdings of a village. To demonstrate this, when advocating the measurement of the minor holdings of each survey field, I had the variation on each holding calculated for two villages of the Chittoor Taluk demarcated by holdings and surveyed in the same manner without any of the holdings being clubbed. The increase determined by survey averaged 35 and 28 per cent. on the area occupied as dry and 22 per cent. respectively on the wet land in occupation. The two villages as marginally noted* comprised altogether 1,309 holdings, of which only 3 per cent. or 42 holdings were found to coincide with the survey as to area; whilst 94 per cent. or 966 holdings exhibited an increase, and 23 per cent. or 301 holdings indicated a deficit of area by survey. The percentage of increase ranged in both villages over 300 per cent. in some instances, and the deficiency similarly ruled as much as 75 per cent. and on one holding exceeded that amount. Notwithstanding therefore that the villages averaged so considerable, and an enhancement of area by survey, a deficiency of area existed in respect to one-fourth of the holdings. Some idea can thus be formed of the vast variation in area the survey will occasion.

* No. 27, Patur.
" 28, Gundalapalli.

26. *Population and Agricultural Statistics.*—The agricultural and non-agricultural population, details of houses and of stock are embodied in the following form for each taluk of the district, the particulars being collated from the Census and Quinquennial Returns. Seemingly agriculturists are limited to holders of land or registered ryots and sub-tenants, and the agricultural laborers are included under non-agriculturists; and consequently the proportion of the

population engaged on agriculture appears to be little more than one-fourth of the total population :—

Taluks.	Population.			Houses of all kinds.	Agricultural Stock.			
	Agricul-turists.	Non-Agricul-turists.	Total.		Tilling Cattle.	Cows.	She Buffaloes.	Sheep.
Chandragiri	18,898	45,914	64,812	21,577	19,853	19,971	2,821	15,110
Chittoor	51,183	107,040	158,223	27,361	30,554	32,109	4,944	74,130
Palmanér	18,536	39,536	58,072	11,235	11,854	26,092	4,092	29,049
Gudiyátam	32,499	127,492	159,991	22,349	33,948	21,420	5,137	33,588
Wálajápet	36,197	151,347	187,544	24,784	35,567	21,875	4,701	77,693
Vellore	31,477	107,549	139,026	19,456	23,583	18,351	4,723	25,120
Arcot	34,868	115,998	149,866	19,607	22,364	12,265	5,132	28,625
Pólúr	42,349	66,416	108,765	12,616	23 586	18,472	4,886	31,099
Wandiwash	51,713	98,748	150,461	18,039	36,997	24,795	9,265	56,914
Total ..	316,720	860,040	1,176,760	177,024	238,306	195,350	45,701	371,328

27. Further statistics as to the number of puttas and of ploughs, and the average assessment and extent of each putta holding and area held for each plough on the average for each taluk of the district, are abstracted in the annexed statement :—

Taluks.	Fasli 1285 (1875-76.)				Number of Puttas for Fasli 1286.	Number of Ploughs	Average Assessment of each Putta holding — Columns 2 and 6.	Average extent of each Putta holding — Columns 5 and 7.	Average Area to each Plough — Columns 5 and 7.
	Assessment.	Occupied Area.							
		Dry.	Wet.	Total.					
1	2	3	4	5	6	7	8	9	10
	Rs.	Acres.	Acres.	Acres.			Rs. A. P.	A. D.	A. D.
Chandragiri ..	62,463	9,795	5,181	14,976	9,009	7,962	6 14 11	1 66	1 88
Chittoor ..	1,84,229	42,227	14,149	56,376	23,854	16,552	7 11 7	2 36	3 40
Palmanér ..	65,697	20,026	4,501	24,527	12,486	5,573	5 4 2	1 96	4 40
Gudiyátam ..	2,24,381	54,085	16,568	70,653	20,116	16,589	11 2 6	3 51	4 26
Wálajápet ..	3,35,108	52,334	36,326	88,660	22,240	14,848	15 1 1	3 99	5 96
Vellore ..	1,82,772	40,045	12,255	52,300	16,017	11,791	16 6 7	3 27	4 44
Arcot	3,09,661	42,886	29,016	71,902	26,420	12,326	11 11 6	2 72	5 83
Pólúr	1,94,822	46,959	21,163	68,122	20,575	10,938	9 7 6	3 31	6 23
Wandiwash ..	3,33,783	58,006	32,746	90,752	29,682	17,984	11 3 11	3 06	5 05
Total ..	18,92,917	366,363	171,905	538,268	180,399	1,14,603	10 7 11	2 98	4 70

28. The holdings run very small indeed, just 3 acres, and the average assessment of each putta is barely Rs. 10½. It needs to be borne in mind that many ryots have interest in more than one putta; but, even if this is allowed for, many holdings of very insignificant extent, less even than the average, must exist throughout the district.

29. *Rent Roll.*—The rent roll of each taluk and the whole district for Fasli 1286 (1876-77) stood as under :—

RENT ROLL—SINGLE AND JOINT PUTTAS.

Taluks.	Ryots paying	From	To	Total.									Total of Single and Joint Puttas.
				Under Rs. 10.		10	30	50	100	250	500	1,000	
				Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Joint.	
Chandragiri ..	..	..	..	5,101	1,680	620	1,249	97	102	43	72	..	1	5,878	3,131	9,009
Chittoor ..	..	..	..	13,809	5,580	2,892	1,662	121	205	23	52	..	..	16,349	7,505	23,854
Palmanér ..	..	..	..	8,634	2,466	659	544	65	61	28	27	..	..	9,386	3,100	12,486
Gudiyátam ..	..	..	..	10,402	3,595	3,012	1,834	498	336	180	179	..	..	14,126	6,990	20,116
Wálajápet ..	..	..	..	13,076	5,002	1,701	1,494	298	368	107	141	..	..	15,202	7,038	22,240
Vellore ..	..	..	..	8,076	3,335	2,291	1,561	299	250	98	83	..	..	10,777	6,240	16,017
Arcot	..	..	..	13,122	4,596	3,795	1,972	933	739	468	540	..	1	18,437	7,983	26,420
Pólúr	..	..	..	11,197	6,427	1,882	1,328	268	254	98	95	..	..	13,469	7,116	20,675
Wandiwash ..	..	..	..	16,341	7,210	3,018	1,930	439	396	174	146	..	..	19,981	9,701	29,682
Total ..				99,758	38,890	19,370	13,574	3,018	2,711	1,219	1,335	3	2	123,595	56,804	180,399

30. *Rainfall.*—The rainfall of the ten Revenue years or faslis preceding the famine 1866-67 to 1875-76 is furnished Talukwar in the subjoined statement, and the average of the whole period is also given :—

Taluks.	AVERAGE RAINFALL—INCHES—1866-67 TO 1875-76.										
	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	Average.
Chandragiri ..	25	18	15	30	33	37	31	34	48	24	30
Chittoor ..	28	13	25	30	46	49	45	45	40	23	34
Palmanér ..	26	17	23	21	35	39	37	47	48	15	31
Gudiyátam ..	22	11	24	31	29	43	44	57	50	26	34
Wálajápet ..	45	29	21	25	38	47	50	52	47	30	38
Vellore	43	22	28	37	48	50	47	53	45	32	40
Arcot	38	20	21	26	39	50	50	37	37	31	35
Pólúr	37	30	21	27	38	39	48	48	41	32	36
Wandiwash ..	31	25	30	29	35	42	66	55	55	28	40
Average ..	33	21	23	28	38	44	46	48	46	27	35

1866-67 to 1875-76.
Average Rainfall of each month.

January ..	.. 0·53	September ..	.. 6 27
February ..	.. 0·64	October ..	.. 6 85
March ..	.. 0·40	November ..	.. 4·42
April ..	.. 0·29	December ..	.. 1·82
May	.. 8 25		35·33
June	.. 2·32		
July	.. 3·10		
August ..	.. 5·44		

31. The average rainfall for each month of the series of years is marginally exhibited. On the whole it is well distributed, a moderate supply being received with the south-west monsoon, nearly two-thirds, and the remainder under the north-east monsoon. The former is the more certain of the two, the latter monsoon occasionally failing to benefit the district either wholly or in part.

32. *Rivers.*—In the taluks now under consideration the chief rivers are the Swarnamukhi, the Pálár, and the Ponna or Poiney. The Swarnamukhi rises in the southern portion of the Chandragiri Taluk and flows in a north-easterly direction towards Chandragiri, near which it is joined by its affluent, the Bhimanadi. The latter drains the extensive range of hills forming the boundary with the Cuddapah District, and the river then takes an easterly course till it passes into the Kalahasti Zemindari, and thence through the Nellore District to the sea. The bed of the Swarnamukhi throughout its course through the Chandragiri Taluk is very slightly below the level of the country on either bank, and consequently numerous river channels are easily led from it, and when the stream fails to flow spring channels are excavated in the sandy bed, and irrigation is thus continuously maintained. Numerous spring or kasam channels also exist along either bank of the river and afford a perennial supply. The Pálár rises in the Kolar Division of Mysore, and having passed through the Kangundi Zemindari it crosses a projecting arm or corner of the Salem District, enters North Arcot and flows on through this district, dividing the Gudiyátam and Wálajápet Taluks to the north from Vellore and Arcot to the south, and then proceeds through Chingleput to the sea. Two important affluents join it in Gudiyátam—the Goderu and the Kanvanadi or Gudiyátam river. Both drain portions of the Palmanér Taluk, and the latter a part of the Punganúr Zemindari as well. The Ponna river is only so termed below the village from which it receives the appellation. In the eastern portion of the Chittoor Taluk it is known as the Bahanadi, and takes its rise on the Cuddapah frontier in the extreme western portion of Chandragiri, and drains almost the whole of the Chittoor Taluk. It forms the boundary between the Chittoor and Wálajápet Taluks, and also between the latter and Gudiyátam, and then unites with the Pálár. The Ponna river has several affluents, and though of moderate size they are very effective for irrigation purposes, as the streams flow for several months after the rains cease. All the rivers and streams are tapped by numerous river channels along their course, and the larger rivers have spring or kasam channels as well on either bank to a greater or less extent.

33. The only other river of importance in the district is the Cheyár. It rises amongst the Javvadi hills between Vellore and the Tirupatúr Taluk of Salem, and passes through the Pólúr Taluk, and thence forms the boundary between Arcot and Wandiwash to its junction with the Pálár.

34. In the Wálajápet Taluk the Cortalayar takes its rise from the surplus discharge of the Kaveripak tank, and the Tirutani river from that of the Sholingapuram tank. The latter merges with Nagari river, draining the Kárvetnagar Zemindari, and eventually unites with the Cortalayar.

35. The district is fairly intersected by rivers and minor streams, and several of the latter, though of slight breadth, flow during six to eight months of each year, and all may be said to be largely utilized for irrigation.

36. *Irrigation Sources.*—Three of the four taluks under report, Chittoor, Gudiyátam, and Wálajápet, have to a greater or less extent had improved irrigation afforded to some of the villages by the Ponna and Pálár anicuts, constructed respectively about 1854-55. The former supplies all three taluks, the latter the Wálajápet Taluk to the north and Arcot to the south of the river. The number of tanks and channels and other sources of irrigation existing in each taluk, both Government, Dasabandam, Chavutayi, and Valavadi, are tabulated in the annexed statement :—

DETAILS OF SOURCES OF IRRIGATION.

Description.	Chandragiri.	Chittoor.	Gudiyátam.	Wálajápet.	Total Number.
Government.					
Tanks	47	227	138	404	816
River Channels	34	137	63	40	274
Spring do.	94	38	143	44	319
Weirs	...	...	...	15	15
Drainages	3	48	8	15	74
Wells	4	...	1	2	7
Total ...	182	450	353	520	1,505
Dasabandam.					
Tanks	78	229	11	1	319
River Channels	13	68	1	...	82
Spring do.	15	22	4	...	41
Wells	...	10	...	...	10
Total ...	106	329	16	1	452
Chavutayi.					
Tanks	11	70	...	3	84
River Channels	...	19	...	...	19
Spring do.	...	1	...	...	1
Total ...	11	90	...	3	104
Valavadi.					
Tanks	3	...	...	...	3
River Channels	5	...	...	...	5
Spring do.	13	...	...	...	13
Total ...	21	...	...	...	21
At special Rates.					
Tanks	4	3	1	...	8
Spring Channels	2	...	...	...	2
Total ...	6	3	1	...	10
Private.					
Tanks	6	3	1	2	12
River Channels	8	...	...	...	8
Spring do.	23	1	...	...	24
Total ...	37	4	1	2	44
Grand Total ...	363	876	371	526	2,136

37. Dasabandam sources are maintained by Dasabandamdars, to whom a grant of land under the source was formerly made as Dasabandam Inam, for the maintenance and repair of the work. Chavutayi Dasabandam sources are similarly held, only the Dasabandamdars receive an assignment of the wet assessment for the same purpose, invariably one-fourth, as the term implies. Valavadi sources supply certain tracts of land granted as wet at a fixed assessment at the time of their construction. They are maintained by the proprietors, who possess the right of charging for any irrigation therefrom extended to other lands. The Valavadi sources do not come under the scope of the settlement, as they are now treated as Inam grants. They are confined to the Chandragiri Taluk. The sources "at special rate" are such as may have been received for some years and may have been made over at Rs. 2-8-0 per acre to the villagers or individuals. The private sources are those recognized as not interfering with Government irrigation, which may have been constructed by private individuals.

38. The sources of irrigation to which these proposals extend aggregate no less than 2,061 as under :—

Details.	Tanks.	Channels.		Weirs.	Drainages.	Wells.	Total.
		Rivers.	Spring.				
Government	816	274	319	15	74	7	1,505
Dasabandam	319	82	41	...	...	10	452
Chavutayi	84	19	1	...	...	...	104
Total ...	1,219	375	361	15	74	17	2,061

39. *Classification of Soils.*—This operation was originally conducted simultaneously with the demarcation throughout the Chandragiri, Chittoor, and Gudiyátam Taluks during the years 1871 to 1876. Whilst the classification of the latter taluk was progressing in 1875, the standard of classification was amended to five sorts under each class of soil, and the classification of the villages of the taluk previously completed was modified accordingly that the whole might be uniform. Before the three taluks detailed could be reported on, it was essential that the classification of the Chittoor and Chandragiri Taluks should be similarly revised to secure uniformity of standard, and of the results of the classification when tabulated for the different taluks. This revision was effected for these two taluks towards the end of 1878 and early part of 1879. At the close of 1878 the Wálajápet Taluk was taken up, and the classification was completed by the classifiers during August 1879. The operation for the whole of the four taluks is now uniform, and each taluk has been either revised or completed in conformity with G.O., No. 221, dated the 15th February 1876, the classification being conducted fieldwar in the first instance and then laid out into blocks. As thus formed into blocks for each village the classification results for the four taluks are furnished in the annexed statement :—

TOTAL CLASSIFIED AREA. ENTRIES ACRES AND PERCENTAGE FOR EACH TALUK.

Classification of Soils.			Chandragiri.		Chittoor.		Gudiyátam.		Wálajápet.		Total.	
Main Series.	Class and Sort.											
Exceptional ..	II	1	23	0	230	0	146	0	24	0	423	0
		2	46	0	1,246	1	1,099	1	751	1	3,142	1
		3	51	0	1,199	1	722	0	605	0	2,577	0
	Total ...	..	120	0	2,675	2	1,967	1	1,380	1	6,142	1
Black or Regar.	III, Clay ..	1	..	..	56	0	1,035	1	292	0	1,383	0
		2	..	..	43	0	1,307	1	902	0	2,252	1
		3	..	..	36	0	1,149	1	1,841	1	3,026	1
		4	..	..	..	..	542	0	1,072	0	1,614	0
		5	..	..	..	..	469	0	1,136	1	1,605	0
	Total ..	..	..	..	135	0	4,502	3	5,243	2	9,880	2

TOTAL CLASSIFIED AREA. ENTRIES ACRES AND PERCENTAGE FOR EACH TALUK—(*Continued.*)

Classification of Soils.			Chandragiri.		Chittoor.		Gudiyátam.		Wálajápet.		Total.	
Main Series.	Class and Sort.											
Black or Regar—(*Contd*).	IV. Loamy ..	1	3,126	6	1,522	1	686	0	835	0	6,169	1
		2	4,140	8	9,339	6	8,243	6	5,448	3	27,170	5
		3	3,688	7	9,820	6	10,275	7	11,899	6	35,682	6
		4	2,037	4	3,834	2	7,542	6	11,971	6	25,384	5
		5	1,432	2	966	1	2,220	2	7,277	3	11,895	2
		..	14,423	27	25,481	16	28,966	21	37,430	18	106,300	19
	V. Sandy ..	1	181	0	484	0	6,294	5	3,227	2	10,186	2
		2	970	2	879	1	2,082	1	5,169	2	9,100	1
		3	1,411	3	402	0	951	1	5,538	3	8,302	1
		4	1,403	2	149	0	17	0	4,218	2	5,787	1
		5	496	1	70	0	204	0	2,621	1	3,391	1
		..	4,461	8	1,984	1	9,548	7	20,773	10	36,766	6
	Total ..	..	18,884	35	27,600	17	43,016	31	63,446	30	152,946	27
Red or Ferruginous.	VII. Loamy ..	1	2,304	4	8,174	5	3,284	2	4,498	2	18,260	3
		2	2,693	5	8,223	5	2,763	2	18,967	9	32,646	6
		3	1,787	3	2,708	2	647	1	25,248	12	30,390	5
		4	293	1	688	1	58	0	14,706	7	15,745	3
		5	444	1	359	0	..	0	5,261	2	6,064	1
		..	7,521	14	20,152	13	6,752	5	68,680	32	103,105	18
	VIII. Sandy ..	1	1,550	3	13,250	8	12,110	9	4,706	2	31,616	6
		2	7,843	15	26,890	16	25,040	17	15,120	7	74,893	13
		3	8,076	15	36,770	23	32,576	23	34,296	16	111,718	19
		4	5,844	11	30,219	19	19,153	14	22,865	11	78,081	14
		5	3,510	7	3,489	2	595	0	2,405	1	9,999	2
		..	26,823	51	110,618	68	89,474	63	79,392	37	306,307	54
	Total ..	..	34,344	65	130,770	81	96,226	68	148,072	69	409,412	72
	Grand Total ..	..	53,348	100	161,045	100	141,209	100	212,898	100	568,500	100

40. One per cent. is thus classified under the exceptional series, which will be explained later on; and the black and red soils embrace respectively 27 and 72 per cent. of the total area. The black soils are confined mainly to Class IV, loamy soils, comprising 19 per cent. of the whole; Classes III, clay soils, and V, sandy soils, amounting only to 2 and 6 per cent., respectively. The red soils include 18 per cent. of loam, Class VII, and 54 per cent. of sandy soil, Class VIII. More than half of the classified area falls therefore under the latter class, red sandy soils. Looking at the Talukwar results it will be seen that Chandragiri has the largest proportion of black soil and the smallest of red; the former comprising the rich loamy soils lying along either bank and in the vicinity of the Swarnamukhi. Chittoor possesses the least proportion of black soil and the greatest of red soil. Throughout Gudiyátam and Wálajápet the proportion of each description of soil is much the same, and the percentage of black and red respectively differs but slightly from that for the Chandragiri Taluk.

41. When, however, the extent rated under the different sorts of each class is considered, it is evident that the classification varies greatly. Under Class IV, black loam, the run of the classification is much higher in Chandragiri than in any other taluk, and is lowest in Wálajápet. The area included under the first sort, IV-1, in the former taluk is greater than the area so classified for the other three taluks collectively. Chandragiri, as the classification indicates and will be shown by the experiments of produce, has the advantage of the best soil, Chittoor may be placed next in order, then Gudiyátam, and last of all Wálajápet, in which moderate and indifferent qualities of soil largely preponderate in parts. I refer here to soils of Class IV, which are mainly under irrigation. Under Class V the soils occur chiefly in Gudiyátam and Wálajápet, following the course of the Pálár, and comprise a fair proportion of land of good quality, more especially in Gudiyátam, where there is a large extent of this soil under garden cultivation. Class VII, red loam, exists mainly in Wálajápet, as that taluk contains two-thirds of the whole area. In each taluk a large proportion of this soil is under either wet or well cultivation. In Wálajápet the considerable area is pretty evenly distributed to the different sorts. Class VIII, red sand, includes also red gravel and stony soils. The higher sorts contain a large area of well cultivation in each taluk, more particularly in Chittoor and Gudiyátam. The medium sort, 3, embraces by far the greatest extent in each taluk, and the apportionment of the other sorts may fairly be regarded as moderate.

42. The classification has been conducted with great care, and thoroughly examined in respect to the Chandragiri, Chittoor, and Wálajápet Taluks. Besides the examination undertaken by the Head Classifier, by whom the blocks have been mainly laid out, each village has been further revised by the Supervisor or the Deputy Inspector, and of the 420 villages forming the three taluks, 335 villages have been finally examined either by Mr. Clerk or by myself, as enumerated in the following statement :—

Taluks.	Total Villages Classified.	Villages examined.		
		By Deputy Director.	By Assistant Director.	Total.
Chandragiri	53	28	9	37
Chittoor	135	95	...	95
Wálajápet	232	38	165	203
Total ...	420	161	174	335

43. This examination appertains solely to work revised or completed subsequent to the resumption of field work in this district in October 1878. No further villages require examination in Wálajápet, but a few in Chandragiri and Chittoor stand over for further inspection at the time of settlement.

44. The Gudiyátam Taluk was partially examined by Mr. Clerk, the Assistant Director, who mainly conducted the work of that taluk, or had charge of the party whilst it was in progress. The taluk has not been as thoroughly revised as the other three, and several of the villages will need to be inspected at the time of settlement, where the application of the proposals in respect to villages may appear to require further consideration and revision.

45. *Lands rated in the Exceptional Class.*—When Acting Director I authorized the treatment of these lands in an exceptional manner, and remarked, with reference to lands

Proceedings, No. 334-33, dated 8th February 1876.

I had inspected in the Gudiyátam Taluk, as follows: "When first seeu the lands have the appearance of a fine stretch of regular wet or nunjah land; but on closer examination the wells were found to be the only source of supply for the bulk of the area. The country falls rapidly away from the hills towards the river, and these well lands are situated in comparatively close proximity to the hills. Lower down there is ordinary wet land dependent on small tanks, fed in some measure by spring channels and drainage from these hills. The sandy bed of these drainages is very little below the level of the adjacent fields, and the underflow or percolation below the surface is so considerable that during the rainy season, when the surface may be dry, water is struck by digging a channel of one foot and a half or two feet. The supply thus diverted is led to the well lands on the lower level. These lands formerly—so seemingly to dry when the latter lands were revised, and water-rate is now charged on irrigation from these temporary channels.

* "Well irrigated." far as supplied by these channels—were more or less pattada patchal,* and were adjusted

"The wells are not more extensive than elsewhere, less so generally as they are circular brick wells of small diameter comparatively and no particular depth, whilst the cost is small compared with that of wells in other parts. At the lowest level the water is rarely more than six feet below the surface; and in the rains the supply is so plentiful that the water is almost flush with the surface, and is run off to the fields on the lower level. The whole is more or less very carefully terraced, and the cultivation is double crop, usually paddy for both, or paddy and ragi.

"The advantages which these lands enjoy are thus clearly natural advantages, and the wells differ materially from those in ordinary dry land. It is the facility and certainty of irrigation that gives these lands their high value; and this being a natural element, not occasioned by the outlay incurred for the well, or the capital the occupant may have sunk in the land, it necessarily follows that regard should be had to this attribute in assessing the soil."

46. On these grounds, lands thus circumstanced have been rated in the exceptional series, and the course was concurred in at the time by the Collector, and has been extended to the other taluks under operation. The lands are invariably under paddy each year for one or two crops. The table affording particulars of the classification shows the total area included under this series for the four taluks to be 6,142 acres, of which 423 acres are placed in the

first sort, 3,142 in the second, and 2,577 in the third. Of the total area 5,552 acres are at present dry by the revenue accounts, and 590 acres wet, needing adjustment to dry at settlement.

47. *Classing of Villages as regards dry cultivation.*—The villages of the four taluks have been divided into two classes. The first, to comprise villages bordering the Pálár River and the affluents of the latter in the Gudiyátum Taluk with a good depth of soil, and in the vicinity of the Railway—intersecting the taluk—and of the principal market town; likewise villages of Wálajápet similarly circumstanced and also bordering the Pálár. The second, to include the remaining or more northerly villages of the foregoing taluks skirting the hills, and having less depth of soil or indifferent sub-soil more or less stony. This latter tract in Wálajápet includes the more central villages of the taluk, rather hilly in parts, and the whole of the eastern villages marching with the Chingleput District and Kárvetnagar Zemindari. Also the whole of the villages of Chittoor and Chandragiri Taluks, throughout which the bulk of the soil may be regarded as of similar character, and the villages as on a par as regards markets, both taluks being well provided with roads. It will be seen from the price lists given for each taluk at paragraph 70 that prices rule higher in Chittoor and Chandragiri than in either Gudiyátam or Wálajápet, and therefore what may be regarded as the more distant villages of the former taluks may be considered as somewhat favorably circumstanced owing to their proximity to the Cuddapah District, where higher prices prevail. The first and second-class villages form distinct tracts, and number respectively 207 and 386 villages by survey, as under :—

Classing of Villages for Dry.			
Taluks.	Number of Villages.		
	First Class.	Second Class.	Total.
Chandragiri ...	...	53	53
Chittoor ...	..	135	135
Gudiyátam ...	137	36	173
Wálajápet ...	70	162	232
Total ...	207	386	593

48. These two classes will, I anticipate, meet circumstance of the remaining taluks of the district. As regards dry soils, the southern taluks are rather better than the northern taluks, and probably a greater proportion of the villages will bear rating in the first class. Palmanér, like Chittoor, will be all second class.

49. *Classing of sources of irrigation.*—For this purpose four classes have been provided for the whole district. The first class to include tanks supplied direct and well fed from the Pálár and Ponna anicut irrigation, or the best and most reliable sources of irrigation of the several taluks, such as the Cáveripak, Mahendravadi, Kodakal Sholankipuram, &c., Tanks. The second class to comprise tanks indirectly fed from the foregoing anicut irrigation, or only after the rivers may have been in flood for some time and the directly-fed or first-class tanks may have filled sufficiently to pass on any surplus supply, also river channels from the Pálár, Ponna, Swaranamukhi, and other rivers affording a perennial supply, and spring or Kasam channels on a par with the latter as regards continuity of the irrigation; likewise river-fed tanks and tanks of fair capacity well fed by the drainage of a considerable extent of country. The third to embrace tanks of moderate size depending solely on local rainfall, the ordinary spring or Kasam channels, and the fair drainage sources. The fourth is to provide for the small, shallow, and indifferently-fed tanks, and the less reliable drainage sources. A few tanks very precariously and only occasionally fed from the anicut irrigation—altogether six—have been incorporated with the third class.

50. Each source has thus been separately classed with reference to its circumstances, the means by which fed, and the degree of capability assignable to the same in respect to the irrigation it may ordinarily afford. Consequently, in villages where there may be several sources—the greatest number in one village is seemingly 33—two or probably three of the classes apply. This procedure differs from the grouping ordinarily pursued in other districts, by which the whole of the irrigation of each village is adjusted under one group by modifying the classification one or two sorts as may be requisite. It conforms, however, with the course followed in Nellore, and recommended originally for Ganjam and seemingly adopted in the settlement of that district.

51. Further, it was arranged by Mr. Wilson, when he visited the district early in 1879 as Director, that, as in Nellore, each source of irrigation should be classed on its merits in this district; for he considered that by this means alone the requirements of the Government of India as to the separation of the land and water assessment would best be met, and the classing of each source separately was undertaken accordingly.

52. By adopting this course the dry assessment applicable to the irrigated land will invariably be the dry rate of the class and sort of soil recorded in the Settlement Register. On the other hand, under irrigation adjusted to one group for each village, the alterations made to the classification by raising or lowering the same one or two sorts, vitiates, to the extent of the modifications made, the appropriateness of the class and sort under which the land may be registered. The entry recorded does not represent the real valuation by settlement of the land as dry; it will be either a higher or a lower value. This is of considerable importance under the Pálár Anicut irrigation and similar projects, where a separation of land and irrigation assessment has to be carried out by deducting from the fixed wet assessment the dry assessment corresponding with the taram at which the land may be registered.

53. Grouping is supposed to simplify the treatment of irrigated land at settlement, but in reality it complicates the same, and this will be realized when the new settlements now in force have to be revised at the conclusion of the period of thirty years. The modifications effected to the classification, to place the whole of the irrigated area of a village appertaining to different sources under one group, will not then be apparent.

54. By adopting the method now advocated, of classing each source separately and giving effect to the same at settlement, it will be practicable, after the expiration of the first term of settlement, to revise the classing of each source on the same basis, with reference to any improvement of supply that may have been made to the work during the currency of the settlement or on other grounds. Each source being kept distinct and so classed, can easily be revised independent of any other source in the same village, should occasion to do so arise.

55. With the numerous sources existing in many villages of this district, the complications that would be occasioned to the classification by attempting to arrange the whole under one group for each village may readily be imagined, and I trust the advantages of classing irrigation sources separately, in place of grouping them, may now be more clearly recognized.

56. Altogether 2,082 separate sources of irrigation have been rated under these several gradations, as indicated by the subjoined abstract giving particulars for each taluk :—

—	Chandragiri.				Chittoor.				Gudiyatam.				Walajapet.				Total.				Total of all.
	Classes.				Classes.				Classes.				Classes.				Classes.				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Government.																					
Tanks ..	..	11	29	7	16	72	81	58	12	39	67	20	60	143	120	81	88	265	297	166	816
River channels ..	..	27	7	.3	3	116	18	..	2	60	1	..	7	31	2	..	12	234	28	4	274
Spring do. ..	..	51	40	..	..	7	31	..	..	98	44	..	4	30	9	3	6	186	124	3	319
Weirs ..	..	..	..	.2	..	..	..	..	..	..	.3	..	..	7	1	3	4	7	1	33	15
Drainages ..	..	..	2	.1	..	..	24	..	..	..	..	..	..	4	8	3	1	4	37	4	74
Wells ..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	3	..	7
Total ..	..	89	80	13	19	195	154	82	14	197	116	27	76	215	141	88	109	696	490	210	1,505
Dasabandam.																					
Tanks ..	..	7	48	23	..	29	129	71	..	..	7	4	..	..	..	1	..	..	..	..	319
River channels ..	..	11	2	..	..	24	18	26	..	1	..	..	..	..	..	..	..	..	..	..	82
Spring do. ..	..	9	6	..	..	6	16	.3	..	1	.3	..	..	..	..	..	..	..	..	..	41
Wells ..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	10
Total ..	..	27	56	23	..	69	170	100	..	2	10	4	1	1	1	1	1	5	4	4	462
Chaverlyi.																					
Tanks ..	..	1	9	1	..	2	35	33	..	..	..	..	..	1	..	..	..	..	..	..	84
River channels ..	..	..	..	..	..	1	8	10	..	..	..	..	..	..	..	..	..	..	..	..	19
Spring do. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1
Total ..	..	1	9	1	..	3	43	44	..	..	..	..	..	2	..	..	..	..	..	..	104
Valavadi.																					
Tanks ..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
River channels ..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
Spring do. ..	..	6	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13
Total ..	..	10	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21
Grand Total ..	..	127	155	38	19	257	367	226	14	199	125	31	76	216	141	91	109	799	788	386	2,082

57. At paragraph 38 the sources are shown as 2,061 to which settlement will be extended, and is exclusive of the 21 Valavadi sources included in the above statement which are not dealt with at settlement, but they require to be classed along with other sources, that the settlement assessment on the lands under them may be recorded in the Settlement Registers in the same manner as for other Inams.

58. The first-class irrigation includes 109 sources, viz., 85 tanks, 12 river and 5 spring channels, and 4 weirs. The area under these river and spring channels being commanded and supplied as well from first-class tanks, they are treated as first-class sources. The weirs, or kandams as they are usually termed, are the rough dams across the streams from the Kávéripák and Sholangipuram Tanks.

59. River channels are mainly rated under the second class, as also the larger number of spring channels. It may be said, and rightly said too, that the irrigation from the best of such sources is equal to any irrigation in the district, either anicut-supplied or otherwise. The anicut-supplied tanks involve little or no labor on the ryot for channel clearance; but not so, however, the river and spring channels, which have constantly to be more or less cleared of sand to maintain a continuous flow or supply of irrigation. This customary labor cannot be separately provided for in the settlement, but it has been usual, as in the settlements of Cuddapah, Nellore, and Chingleput, to take the same into consideration in classing such sources, and a like course has been followed in this district. The better river and spring channels for these reasons are rated in the second class, or one grade below the anicut irrigation, and on a par with the larger tanks river supplied or fed by minor or local streams affording a substantial supply.

60. A few rather indifferent river channels and a good many spring channels are placed in the third class. Save in Wálajápet more tanks are included under the third than the second class. The anicut irrigation in Wálajápet accounts for the difference. Dasabandam and Chavutayi sources are mainly rated as third class also. On the whole, 109 sources are first, 799 second, 788 third, and 386 fourth class. As regards tanks only, 88 fall in the first class, 305 in the second, 528 in the third, and 301 in the fourth class, or more than two-thirds in the two lower classes. Drainage sources comprise the surplus or spent water passed on from irrigation sources and the supplying streams of tank utilized for direct irrigation.

61. *Standards of commutation Crops.*—As the statistical records of the district merely give the area cultivated under each crop irrespective of the registration of the land as either irrigated or unirrigated, and as several of the principal crops are more or less common to both wet and dry lands, viz., ragi, sazza, and jonna, it is not feasible, in the case of dry lands as in other districts, to elicit the actual percentage cultivated with the chief cereals needing consideration in determining the standard crops to be adopted. The difficulty is of no consequence as regards the wet area, for paddy only, as in other settlements, requires to be taken as the standard wet crop. I have consulted the returns for the three years prior to the famine, Faslis 1283 to 1285, or 1873-74 to 1875-76, as likely to represent the normal cultivation of the district. During this period I find the average dry and wet cultivation is returned as 555,205 acres, as marginally noted. The headings relate to the rating of the land as either dry or wet, so that one-third of the cultivated area, according to the crops for the same period, shows 601-622 acres on the average to have been under tillage, and as this includes the area of second-crop cultivation the enhancement on the area previously given as that under cultivation is probably accounted for. The distribution of the crops with reference to the 601,622 acres is supplied in the following statement, those generally cultivated as wet and dry respectively being separated under those heads :—

Fasli.	Dry.	Wet.
	ACRES.	ACRES.
1283	352,594	184,704
1284	397,250	192,794
1285	366,363	171,905
Average ..	372,070	183,135

Particulars of Dry and Wet Crops Cultivated.

Crops.	Area.	Percentage.
Wet Crops.	ACRES.	AS. DS.
1. Paddy, first crop	157,935	67 98
Do. second crop	58,534	25 19
2. Sugar-cane	2,847	1 23
3. Chillies	2,514	1 08
4. Other products*	10,483	4 52
Total ...	232,333	100 0
Dry Crops.		
Ragi	82,343	22 30
Sazza or Cumbu	81,556	22 08
Aruga or Varagu	55,078	14 91
Horse-gram	27,561	7 46
Cholum	18,722	5 07
Chama	4,441	1 20
Paddy (unirrigated)	5,803	1 57
Oil-seeds	61,219	16 58
Indigo	12,587	3 41
Cotton	209	0 06
Pulses	7,415	2 01
Other food-grains	2,717	0 74
Topes, &c.	9,638	2 61
Total ...	369,289	100 0
Total, Wet and Dry ...	601,622	...

* Under 1 per cent.—
Tobacco. | Ground-nuts. | Coccanuts. | Betel, &c.

62. The average area bearing wet assessment is shown above to be 183,135 acres, to which should be added the average extent paying water-rate for irrigation from Government sources. The latter may be taken at 30,000 acres the water-rate, Rs. 90,838, representing an equivalent of 25,954 acres of paddy, or a greater area should ragi also be included in the calculation. If from the sum of these two items the 232,333 acres reckoned in the last statement as under wet crops *minus* the second crop area, 58,534 acres, is deducted, there remains a deficiency of 39,336 acres under the head of wet crops as under :—

		ACRES.
Wet assessed area under cultivation		183,135
Plus area paying water-rate		30,000
Total...		213,135
Deduct—		
Area indicated under wet crops	232,333	
Less second crop	58,534	
		173,799
Remainder ...		39,336

Some portion of the ragi, and also of the sazza, cholum, and oil-seeds (ground-nut and gingelly) appertain to tank irrigation, and putting the deficiency under the head of wet crops down at 40,000 acres in round numbers, the extent may be considered to comprise the crops and area marginally specified. After effecting this, the area under well irrigation requires to be estimated and separated before the probable extent of the solely dry or rain-fed crops can be even thus approximately arrived at. This is undertaken in the subjoined statement, allowing one-eighth of the total area to be well irrigation :—

	ACRES.
Ragi	20,000
Sazza	6,000
Cholum	4,000
Oil-seeds	10,000

Crops.	Area appertained to			
	Well Irrigation.	Dry Cultivation.	Percentage.	
	ACRES.	ACRES.	A.	D.
Ragi	16,000	46,343	16	19
Sazza or Cumbu	8,000	67,556	23	60
Aruga or Varagu	.	55,078	19	24
Horse-gram	...	27,561	9	63
Cholum	3,000	11,722	4	09
Chama	...	4,441	1	55
Paddy	4,000	1,803	0	63
Oil-seeds	8,000	43,219	15	9
Indigo	2,500	10,087	3	52
Cotton	...	209	0	8
Pulses	...	7,415	2	59
Other food-grains ...	...	2,717	0	95
Topes, &c.	1,500	8,138	2	84
Total ...	43,000	286,289	100	0

63. Whether provision is allowed thus for the area under well irrigation or omitted, it is evident that, as regards the dry lands, sazza, ragi, and aruga are the food-grains principally cultivated in the district, and that, if my calculation is near the mark, they collectively occupy some 59 per cent. of the dry area under tillage. The only other food-grain of importance, cholum, is limited to 4 per cent. and is exceeded considerably by horse-gram sown over nearly 10 per cent. of the area. Food-grains and pulses comprise respectively 63 and 12 per cent., or altogether 75 per cent. of the cultivation, the remainder, or one-fourth, being under special products, of which oil-seeds—chiefly gingelly and castor—comprise by far the greater portion, viz., 15 per cent. I propose therefore to select sazza, ragi, and aruga as standard dry crops. They have been taken in the settlements of other districts, and, as may be observed from the following table, they are to a greater or less extent cultivated throughout each taluk. Besides the standard selected, horse-gram, cholum, and oil-seeds are included in the table, that the extent to which they also vary as regards the several taluks may be noticed :—

Taluks.	Area in Acres.					
	Sazza.	Ragi.	Aruga.	Horse-gram.	Cholum.	Oil-seeds.
Chandragiri	2,612	2,746	600	1,459	459	444
Chittoor	10,387	11,052	4,879	7,098	2,559	3,090
Palmanér	400	12,827	264	1,870	263	1,246
Gudiyátam	16,196	8,477	4,547	7,993	3,149	5,422
Wálajápet	10,763	13,288	7,384	1,918	1,373	10,488
Vellore	10,914	7,339	3,097	5,006	5,916	3,562
Arcot	7,988	7,954	9,958	946	1,895	10,379
Pólúr	16,495	8,259	6,858	856	612	10,538
Wandiwash	5,801	10,401	17,491	415	2,496	16,050
Total ...	81,556	82,343	55,078	27,561	18,722	61,219

64. The first, second, fifth, and sixth crops appertain to wet cultivation as well as to dry. Sazza comprises the largest area under any one crop in Chittoor, Gudiyátam, Vellore, and Pólúr. Ragi occupies a similar position in Palmanér where it is almost exclusively cultivated, and in Chandragiri and Wálajápet; whilst in Wandiwash and Arcot, respectively, aruga and oil-seeds exceed the area under other crops. Oil-seeds are very extensively cultivated in Wálajápet, Arcot, Pólúr, and Wandiwash. I purpose assigning the cultivation to the representative crops as hereunder explained :—

Crops.	Standards with which merged Area—Acres.		
	Sazza.	Ragi.	Aruga.
Sazza	67,556	...	...
Ragi	...	46,343	...
Aruga	...	...	55,078
Horse-gram	...	...	27,561
Cholum	11,722	...	...
Chama	4,441	...	...
Paddy	...	1,803	...
Oil-seeds	...	43,219	...
Indigo	...	10,087	...
Cotton	...	209	..
Pulses	7,415	...	...
Other food-grains ...	2,717	...	...
Topes, &c.	...	...	8,138
Total ...	93,851	1,01,661	90,777
Percentage ...	32 78	35·51	31·71

65. The more valuable crops are merged with ragi, the medium crops with sazza, and the less productive with aruga. The three standard crops may be fairly considered as representing equal proportions of the dry cultivation, and I propose to so adopt them in determining the money value of the average produce of dry land. In the exceptional class Taram II, sazza and ragi only will be taken.

66. *Commutation Prices.*—These have to be based on the series of twenty years, 1845-46 to 1864-65, prescribed by Government for the uniform determination of the commutation prices for settlement purposes. Unfortunately, in respect to the earlier years of the first decade, the district price lists are very incomplete, having been destroyed with the old records in most taluks. The lists have been fully obtained for only one taluk (Palmanér) and have been found missing in the other eight taluks for some two to six years during Faslis 1255 to 1264 (1845-46 to 1851-52) as marginally particularized. These omissions are so extensive as to prevent the average resulting for the decade being adopted, and recourse has therefore been had to the list of prices relating to this district tabulated in the Revenue Board Office to amend the same. The district list and the Board's list of prices as thus collated are embodied and compared in the following statement. The entries given refer to the average price per Madras garce for each year :—

Taluks.	Years.	Taluks.	Years.
Chandragiri	6	Vellore.	5
Chittoor	5	Arcot	3
Gudiyátam	3	Pólur	2
Wálajápet	4	Wandiwash. ..	3

3,200 Madras measures equal to 7,200 lb. of paddy.

Faslis.	1845-46 to 1864-65—20 Years.								
	Wet Grain—Paddy.				Dry Grains.				
	Board's List.		District List.		Board's List.		District List.		
	1st Sort.	2nd Sort.	1st Sort.	2nd Sort.	Sazza.	Ragi.	Sazza.	Ragi.	Aruga.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1255	139	128	96	93	198	169	127	133	..
1256	144	131	115	100	186	179	141	136	..
1257	106	96	80	76	128	135	96	103	56
1258	60	54	59	54	78	80	73	78	..
1259	69	63	67	61	85	81	81	78	..
1260	71	64	74	67	81	80	85	81	..
1261	58	52	61	54	71	71	75	71	50
1262	53	48	54	49	69	71	68	66	45
1263	92	87	89	80	135	118	119	109	..
1264	123	114	119	111	147	144	141	131	79
Average ..	92	84	82	74	118	113	101	99	58

1845-46 TO 1864-65—20 YEARS.

Faslis.	Wet Grain—Paddy.				Dry Grains.				
	Board's List.		District List.		Board's List.		District List.		
	1st Sort.	2nd Sort.	1st Sort.	2nd Sort.	Sazza.	Ragi.	Sazza.	Ragi.	Aruga.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1265	134	125	128	121	156	161	157	150	103
1266	94	85	93	87	118	123	122	118	66
1267	129	117	121	111	182	164	155	..	..
1268	141	133	145	135	193	192	188	179	120
1269	119	110	118	109	157	157	155	157	94
1270	156	149	152	142	184	190	193	187	113
1271	173	164	171	162	213	211	205	208	104
1272	165	153	164	152	205	196	195	196	180
1273	168	148	155	145	187	175	171	168	159
1274	172	163	167	158	196	184	179	176	201
Average ..	144	135	141	132	179	175	172	170	127
Average 20 Years ..	118	109	112	103	148	144	136	134	105

67. During the three first years of the period there is a vast disparity between the different lists for all grains. For Faslis 1255 and 1256 the entries recorded in the district list refer solely to the Palmanér Taluk, the least important of all the taluks of the district; and for Fasli 1257 to the Wálajápet, Arcot, and Pólúr Taluks as well. With the exception of these three years in the first decade, there is no marked difference between the lists as regards paddy, but the district list exceeds the Board's in Faslis 1260 and 1261. On the other hand, during Fasli 1263 the Board's list exceeds the district list considerably as regards the price of sazza and ragi, and slightly also for the next fasli (1264). During the second decade there is similarly a slight difference between the lists as regards paddy for Faslis 1267 and 1271, and for Fasli 1268 the quotation by the Board's list is below that by the district list. For sazza and ragi also the average price by the Board's list is uniformly in advance of that now compiled as the district list; but in Faslis 1267 and 1270 to 1275 for the former, and Faslis 1265, 1268, and 1274 for the latter, the variation is more or less extensive. The average of the ten years' list referred to indicates the price of paddy, sazza, and ragi to have ruled respectively Rs. 3, 7, and 5 lower by the district list than by the Board's list. It is not possible to account for this. Throughout the first decade, the district lists being more or less imperfect, some variation might be anticipated, but not so during the second decade, the lists being complete for each taluk and each year. The return rendered to the Board may have comprised an average of a greater number of taluks than may now exist for some or the earlier years; but as the reorganization of the taluks had effect from Fasli 1270, and as the same disparity is noticeable between the lists subsequent to that date, the want of accord is not seemingly capable of explanation, and bebars either one list or the other from being adopted in its entirety.

68. For the second decade, Fasli 1265 to 1274, the district list being complete should, I consider, be accepted; and for the first decade the price of each grain may reasonably be regarded as relatively bearing the same proportion to the average by the Board's list, as the prices of the several grains, by each list, may bear to one another for the second decade; or, in other words, the average by the Board's list might be reduced proportionately for the first decade to conform with the variation determined for the second decade between the two lists. This adjustment is worked out in the following statement; and the average price according to the district list during the ryots' selling months for each grain is also added, and a similar adjustment affected thereto:—

Years.	Board's List.	District List.			
		Average of each Year.		Average of Ryots' Selling Months.	
		As tabulated.	As adjusted.	As tabulated.	As adjusted.
Paddy, 1st Sort.					
1845-46 to 1854-55	Rs. 92	Rs. 82	Rs.	Rs. 81	Rs. 90
1855-56 to 1864-65	144	141	90 141	141	141
Average ..	118	112	115	111	115

Years.	Board's List.	District List.			
		Average of each Year.		Average of Ryots' Selling Months.	
		As tabulated.	As adjusted.	As tabulated.	As adjusted.
Paddy, 2nd Sort.	Rs.	Rs.	Rs.	Rs.	Rs.
1845-46 to 1854-55	84	74	82	75	80
1855-56 to 1864-65	135	132	132	129	129
Average ..	109	103	107	102	104
Paddy Average, 1st and 2nd Sorts.					
1845-46 to 1854-55	88	78	86	78	85
1855-56 to 1864-65	139	136	136	135	135
Average ..	113	107	111	106	110
Sazza or Cumbu.					
1845-46 to 1854-55	118	101	113	89	102
1855-56 to 1864-65	179	172	170	155	155
Average ..	148	136	141	122	128
Ragi.					
1845-46 to 1854-55	113	99	110	105	113
1855-56 to 1864-65	175	170	170	175	175
Average ..	144	134	140	140	144
Aruga or Varagu.					
1845-46 to 1854-55	..	58	..	..	..
1855-56 to 1864-65	..	104	..	..	..
Average ..	..	*90	..	..	..

* Expunging unduly high quotations.

69. As thus modified, the district list is only Rs. 2 less than the average of first and second sort paddy, and Rs. 7 and Rs. 4 respectively less for sazza and ragi than the price by Board's list, as regards the average of each year. The Board's list does not furnish the price of aruga, and this grain will need separate explanation. It will further be observed that by the district lists as adjusted the average price of first and second sort paddy during the ryots' selling months is only one rupee short of the average of each year. For sazza the difference is Rs. 13, and for ragi the price prevailing during the ryots' selling months exceeds the average of each year by Rs. 4, which is another anomaly due seemingly to errors in returning the prices. As tabulated, and without any adjustment, the price for ragi during both decades is higher during the ryots' selling months than the average for each year. The months taken as the ryots' selling months for each grain are marginally detailed. If the district returns were more reliable, a much greater difference in this respect would be perceptible. For settlement purposes, however, the average price of the ryots' selling months for the series of years specified needs to be accepted; and, regarding the foregoing not to accurately represent the same, I have had the prices for the succeeding period of ten years (1865-66 to 1874-75) tabulated in like manner, and an abstract is subjoined:—

Paddy, 1st crop	January and February.
Do. 2nd do.	April and May.
Sazza	September and October.
Ragi	January and February.
Aruga	November and December.

DISTRICT PRICE LISTS, 1865-66 TO 1874-75.

Particulars.	Paddy.			Sazza.	Ragi.	Aruga.
	1st Sort.	2nd Sort.	Average.			
Average of each year	158	147	152	189	187	99
Do. of ryots' selling month ...	152	140	146	172	186	...
Difference ...	— 6	— 7	— 6	— 17	— 1	— 99

70. A difference of Rs. 6 is determined in respect of paddy, Rs. 17 in the case of sazza, and one rupee for ragi. The returns for this third decade are more reliable than for the two preceding, greater attention having doubtless been bestowed upon their preparation; and, inasmuch as there is considerable disparity between the prices ruling in the extreme southern taluks of the district—Pólúr and Wandiwash—and throughout the central and northern taluks, it is essential that the variation between the average of each year and of the ryots' selling months should be fully allowed for to render the commutation rates proposed suitable to the district generally. The talukwar average prices of each year for the second and third decades are furnished in the following statement. The price lists of the first decade are too imperfect to form any reliable conclusions from; hence the third decade is given instead :—

AVERAGE TALUKWAR PRICE OF YEARS SPECIFIED.

Taluks.	1855-56 to 1864-65.					1865-66 to 1874-75.				
	Paddy.		Sazza.	Ragi.	Aruga.	Paddy.		Sazza.	Ragi.	Aruga.
	1st Sort.	2nd Sort.				1st Sort.	2nd Sort.			
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1. Chandragiri	149	141	179	165	..	178	171	218	199	..
2. Chittoor	141	137	185	169	..	149	143	196	175	..
3. Palmanér	152	147	172	173	..	170	158	167	188	90
4. Gudiyatám	145	134	172	162	111	159	149	193	180	76
5. Wálajápet	144	133	168	173	..	165	148	188	197	..
6. Vellore	145	138	178	172	..	166	155	191	184	..
7. Arcot	145	133	179	182	..	155	144	195	197	..
8. Polúr	125	110	156	167	..	141	127	170	179	98
9. Wandiwash	128	118	139	168	97	144	135	..	188	..
Average of all Taluks ..	141	132	170	170	104	158	148	190	187	88
Average of Taluks Nos. 1 and 3.	151	144	175	169	..	174	164	192	193	90
Average of Taluks Nos. 2, 4, 5, 6 and 7	144	135	176	171	111	159	148	193	186	76
Average of Taluks Nos. 8 and 9	126	114	148	167	97	142	131	170	184	98

71. Prices range highest as regards paddy in the Chandragiri and Palmanér Taluks, bordering respectively the Cuddapah District, and Mysore and the Punganúr Zemindari; but as the area under irrigation is comparatively limited in these taluks, it does not signify. On the other hand, in the Pólúr and Wandiwash Taluks irrigated from the Cheyár, and bordering the Tiruvannámalai and Tindivanam Taluks of South Arcot, the average of both descriptions of paddy—Rs. 120 and 137—rules some Rs. 16 less for each decade than the district price—Rs. 136 and 153 respectively—determined for all taluks for corresponding periods. Throughout the remaining five or the central taluks of the district the price of paddy is fairly uniform, whilst for dry grains there is, in respect to sazza and ragi, not sufficient disparity to require recognition. The price of sazza in Wandiwash is not reliable during the first period of ten years, as the taluk prices are recorded for this grain only for three years of the decade. Similarly for the second period one entry alone is recorded—Rs. 298—and, being excessive and likely to prejudice the average, has been excluded.

72. The price lists in respect to aruga need separate attention. The statement for twenty years given at paragraph 66 shows that the prices for aruga during four years of the first and nine of the second decade the only entries available averaged for each decade Rs. 58 and 127 respectively. Aruga is the cheapest of food-grains, being consumed mainly by the agricultural community and by the poorer classes of the population in the localities where grown. It is rarely if ever carted for sale elsewhere, and appears in the bazzars to only a moderate extent. It follows, therefore, that in the foregoing and similar statements, giving quotations of the price of grain, aruga should always be the least costly. A glance at the statement in question shows that for the last three faslis of the period aruga exceeded the price of paddy as marginally exhibited, and that for Fasli

Fasli.	Paddy.	Aruga.
	RS.	RS.
1272	165	180
1273	168	159
1274	172	201

1274 the quotation for aruga is higher than for any of the more valuable cereals. The recorded prices as tabulated for the second decade indicates an average price of Rs. 127 for aruga, whilst second-sort paddy only attained an average of Rs. 132 during the same period. I need hardly say this quotation for aruga is unreliable. The corresponding quotations for Chingleput and Nellore, according to the settlement reports of those districts, are, I observe, Rs. 128 and 95 respectively per garce. These prices are the average on the whole of each year. Curiously the same disparity observed above in respect to the price of aruga in this district recurs in Chingleput. The quotation of the latter district for aruga for the ryots' selling months of Fasli 1274 is Rs. 202 and Rs. 176 for the whole year against Rs. 201 in North Arcot for a like period, whilst for Nellere the price is rendered at Rs. 116 for the whole year and Rs. 111 for the ryots' selling months, or almost half of that returned for the other two districts.

Statement, paragraph 66.

73. Unfortunately the same unreliability occurs as regards the quotations by the district list for aruga during the succeeding or third decade (1865-66 to 1874-75). According to the recorded prices, the average struck for aruga amounts to Rs. 172 per garce, whilst that for paddy is only Rs. 152. By excluding the entries that exceed the price of paddy, and evidently are inaccurate, and thus omitting altogether the quotations for five* taluks, the average of the returns for the remaining three taluks, that for Chittoor being blank, is only Rs. 99 per garce—a very great difference. In the statement at paragraph 66 the quotations for aruga recorded in the taluk lists are given without any modification at all, whilst in the subsequent statements, paragraphs 68 and 70, the doubtful returns are expunged as above explained. Hence the statements for aruga differ. Moreover, the average calculated by taluks comes to Rs. 88 against Rs. 99 calculated on the average of each year during 1865-66 to 1874-75.

* Chandragiri. Wálajápet. Vellore. | Arcot. Wandiwash.

74. The quotations for aruga thus remarked on may be summarized as under :—

ARUGA.

Particulars.	Prices of		Average 1845-46 to 1864-65.	Prices of.
	1845-46 to 1854-55.	1855 56 to 1864-65.		1865-66 to 1874-75.
	RS.	RS.	RS.	RS.
Average of all returns	58	127	105	172
Average modified by expunging excessive entries.	58	104	90	99

As modified, the quotations when compared with the prices determined for the other grains may be accepted as far more reliable than the average of all returns; and if a deduction is allowed for the difference between the prices thus taken as the average of each year and of the ryots' selling month, say of Rs. 7, then the Rs. 90 per grace may, I consider, fairly be accepted as representing what the average quotation should be for the series of twenty years (1845-46 to 1864-65).

75. The district is exceedingly well provided with roads, and as the Railway intersects the district in two directions, grain is largely exported. Mr. Cox in his District Manual calculates the exports of grain to amount to 32,000 tons annually. Most of the large towns, and there are several—Tirupati, Chittoor, Vellore, Gudiyatám, Ambúr, Arcot, Ranipet and Wálajápet—are all large grain marts, so that the district may be said to be amply provided with markets. With such facilities for the sale and export of grain, an uniform deduction of 10 per cent. will suffice to equalize the price as tabulated and now furnished on the basis of the taluk returns with that prevailing in the villages, or the transactions of the bulk of the ryots.

76. The prices thus adopted for each grain, the deductions allowed (1) to equilise the average price of the year to that of the ryots' selling months and (2) to reduce the quotations to those of the ordinary transactions of the ryots, are detailed in the subjoined statement, and the commutation rates resulting from the calculation are worked out, viz., paddy Rs. 95, sazza Rs. 115, ragi Rs. 126, and aruga Rs. 75.

CALCULATION OF COMMUTATION PRICES PER GARCE.

Grain.	By Board's List.	By District List as adjusted.	Deduct difference determined for Ryots' selling months.	Remainder.	Deduct 10 per cent	Remainder	Commutation Rate proposed.
	Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs.
Paddy, 1st sort	118	115	..	..	..	..	..
Do. 2nd do.	109	107	..	..	..	..	..
Average ..	113	111					
Sazza	148	141	6	105	10 8 0	94 8 0	95
Ragi ..	144	140	13	128	12 12 9	115 3 3	115
Aruga	..	90	.. 7	140	14 0 0	126 0 0	126
				83	8 4 10	74 11 2	75

77. The deduction to assimilate the price of paddy to the ryots' selling months (Rs. 6) is the difference indicated by the returns during the ten years 1864-65 to 1874-75. Those latter exhibits a diminution of Rs. 13 in the price of sazza, and this figure has been accepted as ample for the purpose, though the returns for the succeeding ten years records a decrease of Rs. 19. No difference is apparent in this respect for ragi, and consequently no allowance is made. The sale months taken are for dry ragi; but as there are spring and autumn harvests for this crop, when raised under wells and tank irrigation, the price does not seemingly rule lower during the winter months, when dry ragi is disposed of, than at other seasons of the year. For aruga the deduction is, for want of any data, arbitrarily fixed at Rs. 7 (*vide* paragraph 74). *Vide* paragraph 69.

for the series of twenty years only show a variation of one rupee as before remarked. The

78. The commutation prices thus adopted are contrasted in the next statement with those of the neighbouring districts so far as settled.

Districts.	Paddy.	Sazza or Cumbu.	Ragi.	Aruga or Varagu.
	Rs.	Rs.	Rs.	Rs.
Cuddapah	126	130	...	...
Nellore	107	107	...	64
Chingleput	105	...	142	89
South Arcot (Chidambaram)	72	93	93	52
Salem	100	100	100	100
North Arcot	95	115	126	75

79. For Salem an average price being struck for wet and dry grains no comparison is possible. The rate proposed for paddy is lower than that sanctioned for any of the neighbouring districts based on the fixed period of twenty years, whilst for the dry grains the proposed rates are lower than the corresponding prices of Cuddapah and Chingleput, but somewhat above those of Nellore as regards sazza and aruga. Seeing that this district largely exports grain by rail, and that the grain exported is principally paddy or rice, it follows that the price of paddy must, when plentiful, rule comparatively low in this district to admit of this extensive export trade being conducted profitably. As will be hereafter explained, the lands under irrigation and yielding paddy are far more productive than the irrigated lands in either Chingleput or Nellore, and consequently a large margin of the produce remains for sale and is exported. For dry grains the prices adopted are moderate. They rule considerably in advance of the price of paddy, and hence are higher than the prices of dry grains in Nellore, where this difference does not exist, but are much below the commutation prices of Cuddapah and Chingleput for the same grains. The Chidambaram Taluk of South Arcot was the first tract or portion of a district resettled. The rates then taken do not conform to the series of twenty years we are now guided by.

80. *Former Rates of Commutation, Fasli* 1214 (1804-5).—In Mr. Græme's pymaish the commutation rate varied in different localities of the northern taluks from 112 to 163 measures per pagoda for the produce of land under irrigation. There is some doubt, however as to the

measure thus quoted. In the District Manual Mr. Cox remarks it is impossible to ascertain the size of the measure, and surmised it to be the Madras measure of 120 tolas. It seems more likely to have been the measure of 150 tolas prevailing in parts of Chittoor and other taluks, and referred to in the table of district measures given in the Board's Standing Orders, pages 614 to 617. If this conclusion is reliable, the former commutation rate for paddy varied from Rs. 51-9-10 to Rs. 80 per garce; or if the quotation should refer to Madras measures, then the price would be equivalent to Rs. 68 to Rs. 100 per garce. In the southern taluks the commutation rate for both dry and wet grains was fixed seemingly by Mr. Ravenshaw's settlement at the same rate, 5 kallams per pagoda, or Rs. 74-10-8 per garce. The price for the southern taluks being undoubtedly Rs. 74-10-8, the rate fixed by Mr. Græme is most probably that first specified, Rs. 51-9-10 to Rs. 80. Fasli 1215 (1805-6).

81. *Comparison of proposed Prices with those of later years.*—If there be need to demonstrate the moderation of the commutation rates thus adopted, a comparison with the prices prevailing during 1865-66 to 1874-75, the ten years preceding the famine, will readily effect the same, and particulars are subjoined. The series of years includes one or two years of scarcity of produce—1866-67 :—

Particulars.	AVERAGE PRICE PER GARCE.		
	Paddy.	Sazza.	Ragi.
	Rs.	Rs.	Rs.
Prices of ryots' selling months, 1865-66 to 1874-75 ...	146	172	186
Prices accepted for striking the proposed commutation rate	105	128	140
Difference ...	— 41	— 44	— 46
Percentage ...	39	34	33

The prices accepted therefore may be regarded as ranging from 39 to 33 per cent. below the prices prevailing during the ten years preceding the famine.

82. *Grain Values—Total Experiments.*—Experiments as to the produce of both wet and dry cultivation have been made more or less throughout eight seasons. Particulars as to the years and the number of measurements undertaken are embodied in the following abstract. The kyles or experiments aggregate 1,858 for wet crops (paddy) and 262 for dry crops :—

TOTAL EXPERIMENTS AND YEARS.

Crops.	Revenue Department.	Settlement Department.							Total.
		1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1878-79.	
Paddy ..	102	420	570	321	173	37	..	235	1,858
Sazza	37	23	60	..	20	..	9	..	149
Ragi	46	7	..	..	..	..	..	..	53
Aruga	10	53	15	..	2	..	..	..	60
Total ..	195	483	645	321	195	37	9	235	2,120

83. The distribution of the measurement according to the taluks in which undertaken is as follows :—

Taluks.	Paddy.	Sazza.	Ragi.	Aruga.
Chandragiri	410	53	7	39
Chittoor	933	58	3	16
Gudiyatám	277	6	1	2
Wálajápet	238	20	6	3
Palmanér	...	12	36	...
Total ...	1,858	149	53	60

84. The experiments as regards wet cultivation (paddy) are fairly numerous, but for dry crops are comparatively few. They were mainly undertaken by this department, the Revenue Department aiding in 1872-73, when 195 kyles were measured by the Tahsildars and Revenue Inspectors.

85. *Wet Experiments.*—The following tabular statement furnishes the measurements for paddy as undertaken by each department with reference to the description and quality of the soil :—

OUTTURN—MADRAS MEASURES PER ACRE—WET PADDY.

Class and Sort.	Revenue Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent.		Total.		Settlement Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent.		Total.		Total. Number of Kyles.	Average Outturn.
III. 1	..	..	..	..	..	..	..	..	17	1,397	15	840	4	624	36	1,079	36	1,079
III. 2	..	..	1	720	..	..	1	720	9	1,302	4	795	2	308	15	1,035	16	1,015
III. 3	..	..	..	..	..	..	..	..	11	1,244	3	689	..	..	14	1,125	14	1,125
III. 4	..	..	..	..	..	..	..	..	2	998	2	638	..	..	4	818	4	818
III. 5	..	..	..	..	..	..	..	..	1	700	..	..	..	..	1	700	1	700
IV. 1	1	1,280	4	887	..	..	5	966	188	1,562	20	974	6	535	214	1,479	219	1,467
IV. 2	12	1,090	7	796	5	499	24	881	433	1,392	89	859	42	524	564	1,244	588	1,222
IV. 3	9	1,066	3	675	9	480	21	750	259	1,184	87	746	20	500	366	1,043	387	1,026
IV. 4	5	1,223	4	600	..	..	9	946	74	1,085	23	679	6	453	103	953	112	957
IV. 5	1	1,022	..	..	..	..	1	1,022	4	846	1	681	..	..	5	813	6	848
V 1	..	..	..	..	..	..	..	..	8	1,123	2	844	..	..	10	1,067	10	1,067
V 2	..	..	2	603	..	..	2	603	8	1,171	1	840	..	..	9	1,134	11	1,038
VII. 1	6	1,344	7	663	1	465	14	941	128	1,288	18	846	3	604	149	1,221	163	1,196
VII. 2	6	1,149	3	770	5	495	14	834	95	1,222	33	683	17	536	145	1,012	159	996
VII. 3	1	1,031	5	564	..	..	6	642	18	1,009	14	616	9	437	41	749	47	735
VII. 4	..	..	..	..	..	..	..	..	4	1,132	3	675	..	..	7	893	7	893
VII. 5	..	..	..	..	..	..	..	..	1	700	..	..	..	..	1	700	1	700
VIII. 1	2	970	1	825	..	..	3	922	21	1,231	9	720	..	..	30	1,078	33	1,063
VIII. 2	..	..	..	..	..	..	..	..	29	1,182	6	691	1	541	36	1,082	36	1,082
VIII. 3	1	1,120	1	540	..	..	2	830	3	958	2	653	..	..	5	836	7	834
VIII. 4	..	..	..	..	..	..	..	..	1	1,275	..	..	..	..	1	1,275	1	1,275
Total ..	44	..	38	..	20	..	102	..	1,314	..	332	..	110	..	1,756	..	1,858	..

86. Under both heads the kyles comprised 1,358 good, 370 middling, and 130 indifferent. These proportions may be regarded as singular when compared with other districts; but it is, I am glad to be able to assert, usual throughout the northern taluks of this district for the crops to be very uniform, being invariably well cultivated. The experiments relate to both the first and second crops and the different varieties of paddy cultivated; and, as they are more or less spread over some eight years differing in character, they form a sure and reliable basis for estimating the produce. The yield when contrasted with similar results for other districts indicates the return to be generally much heavier in North Arcot, owing, in a great measure, to the smallness of the holdings and the high state in which the wet farming is conducted. The soil is of all qualities, and in some taluks there is a considerrble portion of superior soil. But even where the soils seem poor and the more ordinary and indifferent qualities predominate as in Wálajápet, the yield is much greater than that obtained either in Chingleput or Nellore from similar soils. One great advantage that a large portion of the district possesses in common with some other districts is the facility with which leaves can be obtained for manuring wet cultivation. They may be said to be utilized largely by villagers within a moderate distance of the hills and jungles, and are often carted distances ranging up to ten miles.

87. The Chandragiri and Chitoor Taluks and a portion of Gudiyatám likewise have more or less very great facilities for thus securing vegetable manure; and as the cultivators know well from experience the various kinds of leaves suited for the purpose, and annually treat their land to a good dressing for one if not two crops, and apply cattle manure as well, the land is maintained, as a rule, in a high state of fertility, as exemplified by the results of the experiments undertaken and furnished in the last statement. Where the land is cultivated with two crops, it is ordinarily manured with leaves for one crop and cattle manure, &c., for the other. The portion of the Chandragiri Taluk comprising the valley of the Swarnamukhi may be considered most fertile. The soil is good, a loam of fine texture; the Irrigation from river or spring channels is certain, and the quality of the water is all that can be desired, and is largely conducive to the heavy yield that is secured. The spring channels in this taluk maintained their supply to some extent even during the famine. Parts of Chittoor Taluk skirting the local streams, and also of Gudiyatám similarly situated, and the valley of the Pálár in the latter taluk and in Wálajápet as well, are all more or less highly fertile. Though the crops generally are thus productive, it can hardly be considered that the various taluks of the district are equally productive throughout. The classification details for the taluks now under consideration, paragraph 39, show the quality of the soil to vary greatly; the higher qualities or sorts preponderate in Chandragiri and the lower in Wálajápet. For the 1,756 measurements of the paddy crop made by the department I find the average yield for the whole serious of experiments for each taluk to be as under:—

PADDY—EXPERIMENTS.

Taluks.	Total Number	Average Yield.	
		Madras Measures.	Lbs.
Chandragiri	391	1,346	3,028
Chittoor	896	1,192	2,682
Gudiyatám	261	999	2,248
Wálajápet	208	864	1,944
Total ...	1,756	1,159	2,608

88. In both Chandragiri and Chittoor the outturn is very great. There is no doubt as to the returns, as the experiments I made, and also those undertaken by the Assistant Director, gave similar results. Uniformity as regards the average for each taluk could not be expected. The taluk with the greater proportion of measurements referring to the higher qualities or sorts of soils has the highest average. Chandragiri stands first, Wálajápet last; the average yield for the former being 50 per cent. in advance of the latter.

89. In determining the grain values to be assigned to each class and sort of soil for wet, though the average by the statement given above for 4·1, best black loam, is no less than 1,479 Madras measures per acre and is an average on 214 measurements, I consider that not more than

1,200 Madras measures should be taken for the foregoing or highest taram; for the grain value to be thus adjusted to the classification requires to be so rated as to be applicable to the whole district. This figure, 1,200 Madras measures, is the yield adopted for Coimbatore and Tinnevelly for the best soil. The kyles or experiments relate to too great an extent to the more fertile taluks—Chandragiri and Chittoor—to be followed closely. It is gratifying to thus learn how extensive the yield of paddy is in these taluks and similar tracts, where the greater industry and labor of the cultivator in the matter of manure largely aids the outturn. But the yield of the series of experiments, so largely appertaining to these two taluks, is not fairly applicable to the whole district without modification. Adopting, therefore, 1,200 Madras measures to the best soil, I have adjusted the grain values to each class and sort of soil, and each class of irrigation as shown in the annexed statement. The kyles are merged together for equivalent qualities of soil or sorts according to the classification table, which is also appended:—

OUTTURN—MADRAS MEASURES PER ACRE—WET PADDY.

Classification.					Revenue Department.										Settlement Department.										Total.	
Class.					Number of Kyles and Average Outturn.										Number of Kyles and Average Outturn.											
III.	IV.	V.	VII.	VIII.	Good.			Middling.			Indifferent.			Total.	Good.			Middling.			Indifferent.			Total.		
Sort.					Proposed Grain Values.										Proposed Grain Values.										Total.	
					1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.		1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.	1st Class.	2nd Class.	3rd Class.		Number.	Outturn.
..	1	..	..	..	1,200	1,150	1,100	1,050	1,000	950	900	850	800	1,050	1	1	1	1,280	1,175	1,084	1,191	1,071	..	1,479	219	1,467
1	2	..	1	..	1,100	1,050	1,000	1,000	950	900	850	800	750	960	18	14	8	1,175	1,084	1,191	1,071	..	..	1,231	787	1,215
2	3	1	2	..	1,000	950	900	950	900	850	800	750	700	850	17	14	6	1,084	1,191	1,071	..	..	..	1,039	605	1,023
3	4	2	3	1	865	820	775	900	850	800	750	700	650	800	6	11	2	1,191	1,071	..	..	..	..	957	220	945
4	5	3	4	2	775	730	690	850	800	750	700	650	600	750	1	1	..	1,071	..	..	..	..	..	846	24	852
5	..	4	5	3	680	640	600	800	750	700	650	600	570	700	..	..	..	..	..	..	..	..	..	892	3	892
..	..	5	6	4	590	550	500	750	700	650	600	570	500	650	..	..	..	..	..	..	..	..	..	..	..	..
Total Number of Kyles					..	..	..	..	..	..	..	..	..	..	44	38	20	..	..	..	..	..	..	..	1,858	..

Number of Kyles and Average Outturn.																										
Total.			Indifferent.			Middling.			Good.			Total.			Indifferent.			Middling.			Good.			Total.		
Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.	Number.	Outturn.	Total.
214	535	1,479	6	974	1,562	20	966	188	578	1,369	392	1,197	140	1,112	13	983	3	892	..	..	..	1,756	..	..	110	..
749	537	1,231	49	865	1,369	122	903	578	392	1,197	140	1,112	13	983	3	892	..	..	..	..	..	..	..	..	332	..
566	506	1,039	39	732	1,197	135	798	392	140	1,112	13	983	3	892	..	..	..	..	..	..	..	..	..	..	..	..
203	449	957	16	666	1,112	47	798	140	13	983	3	892	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	..	846	..	623	983	8	894	13	3	892	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	..	892	..	..	892	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1,756	..	..	110	..	332	..	1,314	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

90. The grain values as thus proposed for lands irrigated by sources rated as first-class are lower than the average outturn in respect to each taram as regards the settlement kyles and the total; but, save in one instance, they exceed the average determined on the experiments of the Revenue Department. The latter are, however, not very numerous. The area included in the first-class being limited to that supplied direct from the Pálár and Ponna anicuts, the bulk of the irrigated wet area falls under either the second or the third-class, and it is the grain values of these latter classes that will generally have application to by far the greater number of villages of each taluk. There can therefore be no doubt as to the leniency of the grain values as thus adjusted to each class; and yet, as the subjoined comparative statement clearly shows, they are equivalent to, or rule somewhat higher than, the grain values of other districts, the two highest tarams in Cuddapah excepted :—

COMPARISON OF GRAIN VALUES FOR EACH CLASS OF SOIL—WET MADRAS MEASURES PER ACRE.

District.	Group or Class.	Class of Soil. III. From	III. To	IV. From	IV. To	V From	V To	VII From	VII To	VIII From	VIII To
Cuddapah	1	1,200	400	1,300	700	900	400	900	600	600	400
Nellore	1	800	550	850	650	750	500	800	625	725	500
Chingleput	1	720	390	840	460	600	320	720	390	600	320
Salem	1	720	288	960	360	720	360	840	360	720	288
Tinnevelly	1	960	480	1,200	720	960	480	1,080	600	960	480
Coimbatore	1	1,200	500	1,200	500	900	300	1,200	500	900	300
North Arcot	1	1,100	680	1,200	775	1,000	590	1,100	680	1,000	590

91. Regarded collectively the grain values for the four classes of irrigation may be looked upon as generally in excess of the values assigned in the districts previously settled, notwithstanding that they are adjusted more or less considerably below the average outturn by numerous experiments conducted during several years, which has rarely been the case in any other settlement.

92 *Dry Experiments.*—The series of measurements for each of the dry crops taken as standards are tabulated and given in the subjoined form according to the primary tarams for dry. They relate to four seasons (*vide* the statement at paragraph 82) and comprise both moderate and indifferent harvests :—

OUTTURN—MADRAS MEASURES PER ACRE—DRY.

Primary Taram.	Revenue Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent.		Total.		Settlement Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent.		Total.		Total. No.	Total. Outturn.
						Sazza or Cumbu.												
5	..	..	..	..	2	153	2	153	4	497	5	223	4	156	13	287	15	269
6	1	350	3	196	8	123	12	160	20	387	6	192	10	139	36	191	48	183
7	1	300	5	130	11	93	17	116	30	251	13	187	7	100	50	213	67	188
8	1	165	1	109	3	57	5	89	4	253	4	153	4	117	12	174	17	149
9	..	..	1	176	..	..	1	176	1	513	..	..	..	..	1	513	2	344
	3	..	10	..	24	..	37	..	59	..	28	..	25	..	112	..	149	..
						Ragi.												
5	1	472	1	318	..	..	2	395	..	..	..	..	..	..	..	..	2	395
6	1	310	1	215	3	138	5	188	..	..	..	..	..	..	..	..	5	188
7	13	366	18	218	8	125	39	248	3	339	4	224	..	..	7	273	46	251
	15	..	20	..	11	..	46	..	3	..	4	..	..	..	7	..	53	..
						Aruga or Varagu.												
5	..	..	1	250	..	..	1	250	..	..	..	..	..	..	..	..	1	250
6	..	..	1	200	..	..	1	200	6	386	..	..	..	..	6	386	7	359
7	2	358	1	187	1	90	4	248	15	395	5	224	6	152	26	306	30	298
8	1	313	1	187	1	145	3	215	9	451	3	200	3	152	15	341	18	332
9	1	240	..	..	..	..	1	240	..	..	3	193	..	..	3	193	4	205
	4	..	4	..	2	..	10	..	30	..	11	..	9	..	50	..	60	..

93. Though comparatively few in number, the kyles suffice, as regards sazza and aruga, for a fair estimate of the produce of each crop being framed thereon, bearing in mind the outturn taken in other settlements. For ragi the few measurements are not sufficiently distributed over the different qualities of soil to be of similar use. So far as they go they support the experience afforded by most other districts, that the yield of ragi as a rule exceeds that of sazza. I have regulated the grain values to be assigned to ragi accordingly, and indicate those proposed for each standard crop in the annexed statement. The total number of kyles and average outturn by the above statement is placed in juxta-position with the proposed grain values, and each class and sort of soil, whether there are any experiments or otherwise, is given according to the usual table, the sorts being bracketed together :—

OUTTURN—MADRAS MEASURES PER ACRE—DRY.

Classification. Class. II.	III.	IV.	V.	VII.	VIII.	Sorts.	Total Kyles Number and Average Outturn. Sazza.	Ragi.	Aruga.	Proposed Grain Values for each Class of Villages. Sazza. 1st.	2nd.	Ragi. 1st.	2nd.	Aruga. 1st.	2nd.
1	..	..	..	..	..		..	..	..	*360	..	*360	..	..	..
2	..	..	..	..	..		..	..	..	340	..	360	..	..	..
3	..	..	..	..	..		..	..	..	300	..	320	..	..	..
..	1	1	..	..	..		..	..	..						
..	2	2	..	..	..		..	..	..						
..	3	3	1	1	..		..	..	..						
..	4	4	2	2	1		15	269	..	340	290	360	310	480	400
..	5	5	3	3	2		48	183	2	290	250	310	275	400	330
..	..	..	4	4	3		67	188	5	250	220	275	240	330	280
..	..	..	5	5	4		17	149	46	220	180	240	200	280	230
					5		2	344	5	180	150	200	165	230	180
							..	..	..	150	130	165	135	180	160
										130	115	135	120	160	140
..	1	1	..	..	..		..	..	..						
..	2	2	1	..	..		..	..	..						
..	3	3	2	1	..		..	..	..						
..	4	4	3	2	1		15	269	2	395	1	250	340	290	250
..	5	5	4	3	2		67	188	5	188	7	359	290	250	310
..	..	..	5	4	3		17	149	46	251	30	298	250	220	275
..	..	..	..	5	4		2	344	..	..	18	332	220	180	240
					5		..	..	..	..	4	205	180	150	200
													150	130	165
													130	115	135

* The grain values for Taram II apply to both 1st and 2nd class dry villages.

94. A nominal value is appraised to the exceptional lands, limited in extent and treated as dry under Class II, in order to express their relative value as regards ordinary dry lands. The area rated under this taram is almost exclusively cultivated with paddy for one or more crops, as explained at paragraph 45. The values assigned apply equally to both first and second class villages; and only the two most valuable of the three standard crops are recognized for this taram. The grain values of sazza and ragi for the intermediate sort II-2 are fixed in agreement with the grain value adjusted to the highest ordinary dry soil III-1 and IV-1.

95. The grain values thus adopted for each crop are compared in the next statement with the valuations of other districts in respect to each class of soil. The valuations quoted are those of the highest class of each district.

COMPARISON OF GRAIN VALUES—MADRAS MEASURES PER ACRE.

Crops and Districts.	Class of Soil. III. From	To	IV. From	To	V. From	To	VII. From	To	VIII. From	To
Sazza.										
Cuddapah*	260	150	225	120	170	80	200	100	180	80
Salem	408	216	456	264	336	216	408	192	336	192
Nellore	325	125	250	125	175	80	175	100	140	75
North Arcot	340	180	340	180	250	130	290	150	250	130
Ragi.										
Salem	408	216	456	264	336	216	408	192	336	192
Chingleput	320	156	384	186	256	126	320	156	256	126
North Arcot	360	200	360	200	275	135	310	165	275	135
Aruga.										
Trichinopoly	672	360	840	360	552	360	672	432	432	360
Chingleput	440	276	504	306	376	246	440	276	376	246
Nellore	550	225	425	225	325	140	325	180	275	140
North Arcot	480	230	480	230	330	160	400	180	330	160

* Sub-division Taluks.

96. For sazza or cumbu the proposed values are considerably below those fixed for Salem, but exceed the outturn taken for Nellore and the sub-division taluks of Cuddapah. The latter is a rather poor tract of country. For ragi the valuations are similarly less than those of Salem, and conform with but moderate variation to those of Chingleput, being sometimes slightly higher, but generally a little in excess of the values adopted for the latter district. On the other hand, the valuations of aruga or varagu for North Arcot are invariably much below the produce of this crop as fixed for Chingleput, and greatly so as regards the valuations for Trichinopoly. There is a fair accord between the respective valuations for Nellore and North Arcot. Comparison with Coimbatore is of no avail, as an average valuation for dry grains was struck on three crops—cholum, cumbu, and ragi. In the same manner any reference to the grain values for Cuddapah other than sazza is useless, as the standard crops under consideration are not the standard crops of that district.

97. Judged by the proposals of other districts, the grain values of the several dry crops now recommended need to be regarded as moderately rated for North Arcot. They may be accepted with confidence as tending to effect the revision of the dry assessment so as not to prove burdensome to the people, and as relieving, as a rule, the pressure of the present assessment on the lower and poorer qualities of land, whilst enhancing in some measure the assessment of the better kinds of soil where lightly adjusted at present, or, as not infrequently happens, at much the same rates as the poorer qualities of soil. This will be fully explained further on.

98. *Equivalent of Grain Values in Lbs. per Acre.*—These details are calculated and rendered separately in the accompanying statements for dry and wet grains. For the former the weight of the produce varies from 1,100 to 323 lbs.; for the latter from 2,700 to 1,125 lbs. of paddy. The yield of rice is two-thirds of the weight of paddy :—

ESTIMATED OUTTURN IN MADRAS MEASURES AND LBS PER ACRE—DRY GRAINS.

Classification. Class. II.	III.	IV.	V.	VII.	VIII.	Sort.	Sazza. First Class. Madras Measures.	Lbs.	Second Class. Madras Measures.	Lbs.	Ragi. First Class. Madras Measures.	Lbs.	Second Class. Madras Measures.	Lbs.	Aruga. First Class. Madras Measures.	Lbs.	Second Class. Madras Measures.	Lbs.
1	..	..	..	..	..		360	1,022	..	..	390	1,100	..	..	..	..	..	..
2	..	..	..	..	..		340	966	..	..	360	1,015	..	..	..	..	..	..
3	..	..	..	..	..		300	852	..	..	320	902	..	..	..	..	..	..
..	1	1	..	..	..		340	966	290	824	360	1,015	310	874	480	1,106	400	921
..	2	2	..	1	..		290	824	250	710	310	874	275	775	400	921	330	760
..	3	3	1	2	1		250	710	220	625	275	775	240	677	330	760	280	645
..	4	4	2	3	2		220	625	180	511	240	677	200	564	280	645	230	530
..	5	5	3	4	3		180	511	150	426	200	564	165	465	230	530	180	415
..	..	..	4	5	4		150	426	130	369	165	465	135	380	180	415	160	369
..	..	..	5	..	5		130	369	115	327	135	380	120	338	160	369	140	323

ESTIMATED OUTTURN IN MADRAS MEASURES AND LBS. PER ACRE—WET PADDY.

Classification. Class. III.	IV.	V.	VII.	VIII.	Sort.	First Class. Madras Measures.	Lbs.	Second Class. Madras Measures.	Lbs.	Third Class. Madras Measures.	Lbs.	Fourth Class. Madras Measures.	Lbs.
..	1	..	..	..		1,200	2,700	1,150	2,587	1,100	2,475	1,050	2,362
1	2	..	1	..		1,100	2,475	1,050	2,362	1,000	2,250	960	2,160
2	3	1	2	1		1,000	2,250	950	2,138	900	2,025	850	1,912
3	4	2	3	2		865	1,946	820	1,845	775	1,744	730	1,643
4	5	3	4	3		775	1,744	730	1,643	690	1,552	650	1,462
5	..	4	5	4		680	1,530	640	1,440	600	1,350	570	1,282
..	..	5	..	5		590	1,327	550	1,237	550	1,237	500	1,125

99. *Expenses of Cultivation.*—These details have been estimated on the basis of information recorded for certain selected villages of the four taluks by the Supervisor, Attota Ramaya, the Assistant Director, Mr. Clerk, and myself. In dry land an average of seven to eight acres to each plough according to the quality of the soil is accepted, and the average cost of a pair of bullocks is taken as Rs. 37-8-0 in the better and Rs. 27-8-0 in the poorer soils. Similarly, for wet cultivation, it is reckoned that a pair of bullocks will plough four acres of single crop land, or an equivalent area of land partly first and partly second crop. The latter is most general, and the estimated expenses relate to one crop only. Working cattle are set down as costing from Rs. 36 to Rs. 29 the pair, at prices varying from Rs. 50 to Rs. 25, including one-fourth as buffaloes at Rs. 20. The bullocks and buffaloes are calculated to work for six and five years respectively on the average. The estimated cost thus resulting per acre for each standard dry crop and for paddy is as follows. Straw, which is a valuable commodity in this district, is not taken into account in these calculations. No provision is made for feeding the working cattle with gram, as they are not fed with gram or other grain, as a rule, in this district.

ESTIMATED EXPENSES OF CULTIVATION.

Primary Taram.	Cost per Acre for: Bullocks.	Implements.	Manure.	Seed.	Wages and Labor.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
		Sazza or Cumbu.				
1 to 5	0 14 0	0 7 0	0 8 0	0 1 9	2 8 3	4 7 0
6	0 13 0	0 6 9	0 6 0	0 1 9	2 8 3	4 3 9
7	0 12 0	0 6 9	0 6 0	0 1 6	2 6 0	4 0 3
8	0 11 0	0 6 6	0 4 0	0 1 6	2 2 0	3 9 0
9	0 10 0	0 6 0	..	0 1 6	1 15 8	3 1 2
10	0 9 0	0 5 6	..	0 1 3	1 12 2	2 11 11
11	0 8 0	0 5 0	..	0 1 3	1 11 0	2 9 3
		Ragi.				
1 to 5	0 14 0	0 7 0	0 8 0	0 2 8	2 7 0	4 6 8
6	0 13 0	0 6 9	0 6 0	0 2 8	2 7 0	4 3 5
7	0 12 0	0 6 9	0 6 0	0 2 4	2 3 3	3 14 4
8	0 11 0	0 6 6	0 4 0	0 2 4	1 15 6	3 7 4
9	0 10 0	0 6 0	..	0 2 4	1 12 3	2 14 7
10	0 9 0	0 5 6	..	0 2 0	1 11 0	2 11 6
11	0 8 0	0 5 0	..	0 2 0	1 10 0	2 9 0
		Aruga or Varagu.				
4 and 5	0 14 0	0 7 0	..	0 3 4	1 14 0	3 6 4
6	0 13 0	0 6 9	..	0 3 4	1 13 3	3 4 4
7	0 12 0	0 6 9	..	0 3 0	1 11 0	3 0 9
8	0 11 0	0 6 6	..	0 3 0	1 8 9	2 13 3
9	0 10 0	0 6 0	..	0 3 0	1 6 4	2 9 4
10	0 9 0	0 5 6	..	0 2 6	1 4 2	2 5 2
11	0 8 0	0 5 0	..	0 2 6	1 4 2	2 3 8
		Wet Paddy.				
1	1 12 0	0 14 0	2 8 0	0 14 0	6 3 0	12 3 0
2	1 12 0	0 14 0	2 8 0	0 14 0	5 15 6	11 15 6
3	1 8 0	0 14 0	2 8 0	0 14 0	5 9 5	11 5 5
4	1 8 0	0 12 0	2 0 0	0 12 0	4 15 11	9 15 11
5	1 6 0	0 12 0	1 12 0	0 12 0	4 11 0	9 5 0
6	1 6 0	0 10 0	1 8 0	0 12 0	4 4 0	8 8 0
7	1 4 0	0 10 0	1 4 0	0 12 0	4 2 0	8 0 0

100. As the dry standard crops need to be taken in equal proportions in the ordinary tarams, the average expenses for dry cultivation will be as under :—

DRY CULTIVATION—AVERAGE COST PER ACRE.

Crops.	Primary Tarams. 1 to 3	4 and 5	6	7	8	9	10	11
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Sazza	4 7 0	4 7 0	4 3 9	4 0 3	3 9 0	3 1 2	2 11 11	2 9 3
Ragi	4 6 8	4 6 8	4 3 5	3 14 4	3 7 4	2 14 7	2 11 6	2 9 0
Aruga	..	3 6 4	3 4 4	3 0 9	2 13 3	2 9 4	2 5 2	2 3 8
Average ..	4 6 10	4 1 4	3 14 6	3 10 5	3 4 6	2 13 8	2 9 6	2 7 4

101. These estimates make fair provision for all the ordinary processes and expenses incidental to ordinary dry and wet cultivation, and that they are liberally framed will be evident from the subjoined comparison with similar rates for other districts :—

COMPARISON OF CULTIVATION EXPENSES.

Districts.	Dry. From	Dry. To	Wet. From	Wet. To
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Cuddapah	6 2 9	1 10 0	19 0 0	5 10 0
Nellore	5 4 0	1 3 7	10 8 3	9 9 7
Chingleput	6 0 0	3 10 0	11 0 0	4 8 0
Salem	5 12 0	3 12 0	10 14 0	3 8 0
Coimbatore	3 6 4	2 3 4	13 2 10	4 12 10
North Arcot	4 7 0	2 7 4	12 3 0	8 0 0

102. In making any comparison it is necessary to bear in mind that the commutation rate is an important factor in calculating the expenses of cultivation, and, as the commutation rate proposed for North Arcot for paddy, Rs. 95, is lower than that of the other districts,* it follows that the difference is really greater than the foregoing comparison may indicate.

	Paddy per Garce. RS.
* Cuddapah, Coimbatore	126
Nellore	107
Chingleput	105

At these higher values the cultivation expenses for this district would be as under :—

Paddy per Garce. RS.	Cultivation Expenses would be RS. A. P.	RS. A. P.
126	14 7 11 to	9 9 5
107	13 1 3 to	8 9 10
105	12 14 11 to	8 8 2

103. Practically, therefore, the estimated expenses for wet now submitted have been exceeded in former settlements, as regards the districts cited, in but one district, Cuddapah, and only then as regards the higher tarams, as the calculations for Cuddapah descend to Rs. 5-10-0 per acre, whilst, as just shown, the equivalent for North Arcot is Rs. 9-9-5. For the lower tarams the expenses as worked out for Nellore are somewhat higher even than for North Arcot. As regards the expenses of dry cultivation, the same disparity occurs in respect to any comparison with either Cuddapah, Coimbatore, or Chingleput, the rate of conversion adopted in those districts being higher than the proposals for North Arcot. For Salem, an average being struck for dry and wet grains, any detailed comparison is impracticable. The expenses as worked out for dry and wet also may reasonably be accepted as fair and moderate in amount.

104. *Money Rates for Dry.*—To determine these the first process is to strike an average of the varying grain values per acre for the three standard dry crops. The next, to make the deductions already particularized for vicissitudes of seasons and cultivation expenses, and the value of the net produce, and the half net on which the money-rates require to be framed, is the result. The statement annexed below exhibits the mean value of the produce of an acre of dry land for each of the primary tarams :—

DRY GRAIN VALUES PER ACRE—SAZZA RS. 115, RAGI RS. 126, AND ARUGA RS. 75.

Primary Tarams.	Sazza. Madras Measures.	Sazza. Value.	Ragi. Madras Measures.	Ragi. Value.	Aruga. Madras Measures.	Aruga. Value.	Mean of Grain Values per Acre.
		RS. A. P.		RS. A. P.		RS. A. P.	RS. A. P.
1	360	12 15 0	390	15 5 9	..	..	14 2 5
2	340	12 3 6	360	14 2 10	..	..	13 3 2
3	300	10 12 6	320	12 9 9	..	..	11 11 1
4	340	12 3 6	360	14 2 10	480	11 4 0	12 8 9
5	290	10 6 9	310	12 3 4	400	9 6 0	10 10 8
6	250	8 15 9	275	10 13 8	330	7 11 9	9 2 11
7	220	7 14 6	240	9 7 3	280	6 9 0	7 15 7
8	180	6 7 6	200	7 14 0	230	5 6 3	6 9 3
9	150	5 6 3	165	6 8 0	180	4 3 6	5 5 11
10	130	4 10 9	135	5 5 1	160	3 12 0	4 9 3
11	115	4 2 1	120	4 11 8	140	3 4 6	4 0 9

105. The money rates resulting from the mean value of the gross produce per acre are calculated out in the following statement. The first three of the primary tarams apply to the exceptional series, the others only to ordinary dry soils :—

DRY—CULTIVATION OF PROPOSED RATES.

Primary Tarams.	Mean of Grain Values per Acre.	Deductions.			Net Value.	Half Net.	Proposed Rates.
		One-fifth for Vicissitudes of Seasons.	Cultivation Expenses.	Total.			
1	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
2	14 2 5	2 13 3	4 6 10	7 4 1	6 14 4	3 7 2	3 8 0
3	13 3 2	2 10 2	4 6 10	7 1 0	6 2 2	3 1 1	3 0 0
4	11 11 1	2 5 5	4 6 10	6 12 3	4 14 10	2 7 5	2 8 0
5	12 8 9	2 8 2	4 1 4	6 9 6	5 15 3	2 15 7	3 0 0
6	10 10 8	2 2 1	4 1 4	6 3 5	4 7 3	2 3 7	2 4 0
7	9 2 11	1 13 5	3 14 6	5 11 11	3 7 0	1 11 6	1 12 0
8	7 15 7	1 9 6	3 10 5	5 3 11	2 11 8	1 5 10	1 6 0
9	6 9 3	1 5 0	3 4 6	4 9 6	1 15 9	0 15 10	1 0 0
10	5 5 11	1 1 2	2 13 8	3 14 10	1 7 1	0 11 6	0 12 0
11	4 9 3	0 14 8	2 9 6	3 8 2	1 1 1	0 8 6	0 8 0
	4 0 9	0 12 11	2 7 4	3 4 3	0 12 6	0 6 3	0 6 0

106. The rates as applicable to each class and sort of soil and each class of villages are next tabulated.

TABLE OF PROPOSED RATES—DRY.

Classification. Class. II.	III.	IV.	V.	VII.	VIII. Sorts.	First Class. Taram.	First Class. Rate.	Second Class. Taram.	Second Class. Rate.
1	1	1	..	..	..	1	Rs. A. P. 3 8 0	1	Rs. A. P. 3 8 0
2	2	2	..	..	..	2	3 0 0	2	3 0 0
3	3	3	..	..	..	3	2 8 0	3	2 8 0
..	4	4	1	1	..	4	..	..	..
..	5	5	2	2	1	5	3 0 0	5	2 4 0
..	..	..	3	3	2	6	2 4 0	6	1 12 0
..	..	..	4	4	3	7	1 12 0	7	1 6 0
..	..	..	5	5	4	8	1 6 0	8	1 0 0
..	..	..	..	..	5	9	1 0 0	9	0 12 0
..	..	..	..	..	6	10	0 12 0	10	0 8 0
						11	0 8 0	11	0 6 0

107. The rates applicable to the ordinary dry soils or primary tarms 4 to 11, excluding the first three tarams which comprise the exceptional series only, are contrasted with the sanctioned dry rates of other districts in the annexed table :—

COMPARISON OF DRY RATES OF DISTRICTS ACCORDING TO CLASSES—ENTRIES, RS. AS.

Class and Sort.	Cuddapah. First.	Cuddapah. Second.	Cuddapah. Third.	Cuddapah. Fourth.	Nellore. First.	Nellore. Second.	Nellore. Third.	Nellore. Fourth.	Salem. First.	Salem. Second.	Salem. Third.	Salem. Fourth.	Chingleput. First.	Chingleput. Second.	Chingleput. Third.	Coimbatore. First.	Coimbatore. Second.	North Arcot. First.	North Arcot. Second.
3 1	4 0	2 0	2 4	2 0	4 0	3 8	3 0	2 8	2 8	1 12	1 4	1 0	2 8	2 0	1 12	2 0	1 8	3 0	2 4
3 2	3 0	2 0	1 8	1 4	2 8	2 0	1 12	1 8	1 12	1 4	1 0	0 10	1 12	1 8	1 4	1 8	1 4	2 4	1 12
3 3	1 12	1 4	1 0	0 12	1 12	1 8	1 4	0 12	0 8	..	..	..	1 4	1 2	1 0	1 4	1 0	1 12	1 6
3 4	0 12	0 8	0 8	..	..	..	..	..	..	..	..	..	1 0	0 12	0 8	1 0	0 8	1 6	1 0
3 5	..	..	..	..	..	..	..	..	..	..	..	..	0 12	0 8	0 6	0 12	0 6	1 0	0 12
4 1	3 0	2 0	1 8	1 4	3 0	2 8	2 4	2 0	3 0	2 8	2 0	1 8	3 0	2 8	2 0	1 8	1 4	3 0	2 4
4 2	1 12	1 4	1 0	0 12	1 12	1 8	1 4	1 0	2 8	1 12	1 4	1 0	2 8	2 0	1 12	1 6	1 2	2 4	1 12
4 3	0 12	0 8	0 8	..	1 4	1 0	0 12	..	1 12	1 4	1 0	0 10	1 8	1 4	1 4	1 4	1 0	2 0	1 6
4 4	..	..	..	..	..	..	..	..	1 4	1 0	0 12	..	1 4	1 0	1 0	1 2	0 12	1 12	1 6
4 5	..	..	..	..	..	..	..	..	1 0	0 12	0 10	..	1 0	0 12	0 12	1 0	0 10	1 10	1 4
5 1	1 12	1 4	1 0	0 12	1 12	1 8	1 4	1 0	2 8	2 0	1 12	1 4	2 8	2 0	1 12	2 0	1 8	3 0	2 4
5 2	0 12	0 8	0 8	0 8	1 4	1 0	0 12	0 8	1 12	1 4	1 0	0 10	1 12	1 6	1 4	1 6	1 2	2 4	1 12
5 3	0 4	0 4	0 4	..	0 8	0 8	0 6	..	1 0	0 12	0 8	0 4	1 0	0 12	1 0	1 4	1 0	2 0	1 6
5 4	..	..	..	..	..	..	..	..	0 12	0 10	0 6	..	0 12	0 10	0 8	1 2	0 12	1 10	1 4
5 5	..	..	..	..	..	..	..	..	0 8	0 8	0 4	..	0 8	0 8	0 6	1 0	0 10	1 8	1 2
7 1	1 8	1 4	1 8	0 12	..	..	2 0	1 12	2 8	1 12	1 4	1 0	1 12	1 6	1 4	1 8	1 4	2 8	1 12
7 2	0 12	0 8	0 8	0 8	..	..	1 4	0 12	1 12	1 4	1 0	0 10	1 4	1 0	0 12	1 4	1 0	2 0	1 6
7 3	..	..	..	..	..	..	0 14	0 8	1 0	0 12	0 8	0 4	1 0	0 8	0 6	1 0	0 8	1 8	1 4
7 4	..	..	..	..	..	..	..	..	0 8	0 6	..	..	0 8	0 6	0 4	0 8	0 6	1 4	1 0
7 5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1 0	0 12
8 1	0 12	0 8	0 8	0 8	..	..	1 8	1 4	2 8	2 0	1 12	1 4	1 8	1 4	1 4	1 8	1 4	2 8	1 12
8 2	0 8	0 4	0 4	0 4	..	..	0 10	0 8	1 12	1 4	1 0	0 10	1 4	1 0	0 12	1 4	1 0	2 0	1 6
8 3	..	..	..	..	..	..	0 6	0 4	1 0	0 12	0 8	0 4	1 0	0 8	0 6	1 0	0 8	1 8	1 4
8 4	..	..	..	..	..	..	..	..	0 8	0 6	..	..	0 8	0 6	0 4	0 8	0 6	1 4	1 0
8 5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1 0	0 12

108. The rates start from Rs. 3 downwards and, in respect to the Rs. 3 rate, are in accord with the rate sanctioned for Salem to the west and Chingleput to the east. Generally, the first-class rates are almost identical with those of a similar class for Chingleput and conform fairly with those of Salem and of Nellore as well. The second-class rates—applying to villages other than those comprised within the valley of the Pálár—coincide very closely with the first-class or normal rates of Coimbatore, as there is only a slight difference in the higher tarams, the rates of the latter district being the lower of the two. On the whole, except with Cuddapah for the lower qualities of soil, the comparison fails to indicate any very marked disparity. The red soils of North Arcot conform more with the fertile soils of Salem than the more sterile soils of Cuddapah. There is a considerable extent of good and really fine red soil in the taluks of Salem, whilst they differ from those of Cuddapah. The district is mostly separated from the district bordering Salem, and the rates proposed do, as they should, concide with those Cuddapah by a considerable range of hills and the conformation of the country on either side is very dissimilar, with the exception perhaps of the Palmanér Taluk. The latter is however separated from the Cuddapah frontier by the Punganúr Zemindari.

109. *Money Rates for Wet.*—These are calculated out in the subjoined statement for the four different groups under which the irrigation sources of the several villages have been classed. The expenses of cultivation are the same for each class and sort of soil throughout the four classes, and the grain produce of each class is that already worked out at paragraph 89 :—

WET—CALCULATION OF PROPOSED RATES. PADDY, Rs. 95 PER GARCE.

Primary Taram.	Grain Produce.	Value.	Deductions.			Net Value	Half Net.	Proposed Rate.
			One-fifth for Vicissitudes of Season.	Cultivation Expenses.	Total.			
First Class.	M. M.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
I	1,200	35 10 0	7 2 0	12 3 0	19 5 0	16 5 0	8 2 6	8 0 0
II	1,100	32 10 6	6 8 6	11 15 6	18 8 0	14 2 6	7 1 3	7 0 0
III	1,000	29 11 0	5 15 0	11 5 5	17 4 5	12 6 7	6 3 3	6 0 0
IV	865	25 10 10	5 2 2	9 15 11	15 2 1	10 8 9	5 4 4	5 4 0
V	775	23 0 0	4 9 7	9 5 0	13 14 7	9 : 5	4 8 8	4 8 0
VI	680	20 3 0	4 0 7	8 8 0	12 8 7	7 10 5	3 13 2	3 12 0
VII	590	17 8 3	3 8 1	8 0 0	11 8 0	6 0 3	3 0 2	3 0 0
Second Class.								
I	1,150	34 2 3	6 13 3	12 3 0	19 0 3	15 2 0	7 9 6	7 8 0
II	1,050	31 2 9	6 3 9	11 15 6	18 3 3	12 15 6	6 7 9	6 8 0
III	950	28 3 3	5 10 3	11 5 5	16 15 8	11 3 7	5 9 9	5 8 0
IV	820	24 5 6	4 13 11	9 15 11	14 13 10	9 7 8	4 11 10	4 12 0
V	730	21 10 9	4 5 4	9 5 0	13 10 4	8 0 5	4 0 2	4 0 0
VI	640	19 0 0	3 12 10	8 8 0	12 4 10	6 11 2	3 5 7	3 4 0
VII	550	16 5 3	3 4 3	8 0 0	11 4 3	5 1 0	2 8 6	2 8 0
Third Class.								
I	1,100	32 10 6	6 8 6	12 3 0	18 11 6	13 15 0	6 15 6	7 0 0
II	1,000	29 11 0	5 15 0	11 15 6	17 14 6	11 12 6	5 14 3	6 0 0
III	900	26 11 6	5 5 6	11 5 6	16 10 11	10 0 7	5 0 3	5 0 0
IV	775	23 0 0	4 9 7	9 15 11	14 9 6	8 6 6	4 3 3	4 4 0
V	690	20 7 9	4 1 7	9 5 0	13 6 7	7 1 2	3 8 7	3 8 0
VI	600	17 13 0	3 9 0	8 8 0	12 1 0	5 12 0	2 14 0	3 0 0
VII	550	16 5 3	3 4 3	8 0 0	11 4 3	5 1 0	2 8 6	2 8 0
Fourth Class.								
I	1,050	31 2 9	6 3 9	12 3 0	18 6 9	12 12 0	6 6 0	6 8 0
II	960	28 8 0	5 11 2	11 15 6	17 12 8	10 13 4	5 6 8	5 8 0
III	850	25 3 9	5 0 9	11 5 5	16 6 2	8 13 7	4 6 9	4 8 0
IV	730	21 10 9	4 5 4	9 15 11	14 5 3	7 5 6	3 10 9	3 12 0
V	650	19 4 9	3 13 9	9 5 0	13 2 9	6 2 0	3 1 0	3 0 0
VI	570	16 14 9	3 6 2	8 8 0	11 14 2	5 0 7	2 8 3	2 8 0
VII	500	14 13 6	2 15 6	8 0 0	10 15 6	3 14 0	1 15 0	2 0 0

110. According to the classification table, the rates are tabulated in the form appended below in respect to each irrigation class :—

CLASSIFICATION.					WET CLASSES.							
Class.					First.		Second.		Third.		Fourth.	
III.	IV.	V.	VII.	VIII.	Taram.	Rate.	Taram.	Rate.	Taram.	Rate.	Taram.	Rate.
Sorts.												
						RS. A. P.		RS. A. P.		RS. A. P.		RS. A. P.
..	1	..	..	..	1	8 0 0	2	7 8 0	3	7 0 0	4	6 8 0
1	2	..	1	..	3	7 0 0	4	6 8 0	5	6 0 0	6	5 8 0
2	3	1	2	1	5	6 0 0	6	5 8 0	8	5 0 0	10	4 8 0
3	4	2	3	2	7	5 4 0	9	4 12 0	11	4 4 0	13	3 12 0
4	5	3	4	3	10	4 8 0	12	4 0 0	14	3 8 0	16	3 0 0
5	..	4	5	4	13	3 12 0	15	3 4 0	16	3 0 0	17	2 8 0
..	..	5	..	5	16	3 0 0	17	2 8 0	17	2 8 0	18	2 0 0

111. The wet rates aggregate eighteen altogether and are, I am aware, liable to be considered more numerous than the rates proposed in the settlement of districts more recently or at present under operations, viz., eight wet rates in Chingleput, nine in Coimbatore, and twelve in Cuddapah. There were however eighteen rates provided for Nellore. I am unable to accept for North Arcot that the difference between the classification sorts is identical with the variation existing between one class of irrigation as arranged for settlement and another—the next in the scale of classing. In the higher tarams the difference proposed between one sort and the next is one rupee, whilst the classes vary only 8 annas. Consequently the rates for wet as worked out appear rather numerous, and there is an absence of the usual symmetry or uniformity of progression in the scale of rates thus proposed. However, the symmetry of the table of rates is a minor detail, of no real importance though desirable for the sake of simplicity, if attainable without detriment to the revision of assessment generally.

112. As in classing the sources of irrigation, as explained at paragraph 49, each source has been separately dealt with, and not so adjusted for the village generally as to bring all the sources of irrigation under one group, the want of unison noticeable between the rates of one class and the next is of no real significance. There was a similar disparity in the table of rates for Nellore, and they were introduced without any difficulty and are easily understood. In fact, they are more readily intelligible to the ryots generally when thus arranged than when merged under one group only for each village.

113. The wet rates of assessment as proposed for this district are compared with those sanctioned for other districts in the subjoined table :—

COMPARISON OF WET RATES OF DISTRICTS ACCORDING TO GROUPS OF IRRIGATION—ENTIRES, Rs. As.

Class and Sort.	North Arcot.				Chingleput.				Coimbatore.				Salem.					Cuddapah.				Nellore.				
	First.	Second.	Third.	Fourth.	First.	Second.	Third.	Fourth.	First.	Second.	Third.	Fourth.	First.	Second	Third.	Fourth.	Fifth.	First.	Second.	Third.	Fourth.	First.	Second.	Third.	Fourth.	Fifth.
1	7 0	6 8	6 0	5 8	6 4	5 0	4 0	3 0	10 0	8 0	6 0	4 0	7 0	6 0	5 0	4 0	3 0	9 0	8 0	7 0	5 8	7 0	6 8	5 8	4 0	3 0
2	6 8	6 0	5 4	4 8	6 0	4 8	3 8	2 8	9 0	7 0	5 8	3 8	6 8	5 8	4 8	3 8	2 8	8 0	7 0	6 0	4 8	6 8	6 0	5 4	3 8	2 8
3	6 4	5 8	5 0	4 4	5 8	4 8	3 8	2 8	8 8	6 8	5 4	3 4	6 4	5 4	4 4	3 4	2 4	8 0	6 8	5 8	4 4	6 4	5 8	5 0	3 4	2 4
4	6 0	5 4	4 8	4 0	5 4	4 4	3 4	2 4	8 0	6 4	5 0	3 0	6 0	5 0	4 0	3 0	2 0	7 8	6 4	5 4	4 0	6 0	5 4	4 8	3 0	2 0
5	5 8	5 0	4 4	3 8	5 0	4 0	3 0	2 0	7 8	6 0	4 8	2 8	5 8	4 8	3 8	2 8	1 8	7 4	6 0	5 0	3 8	5 8	5 0	4 4	2 8	1 8
6	5 4	4 8	4 0	3 4	4 8	3 8	2 8	1 8	7 4	5 8	4 4	2 4	5 4	4 4	3 4	2 4	1 4	7 0	5 8	4 8	3 4	5 4	4 8	4 0	2 4	1 4
7	5 0	4 4	3 8	3 0	4 4	3 4	2 4	1 4	7 0	5 4	4 0	2 0	5 0	4 0	3 0	2 0	1 0	6 8	5 4	4 4	3 0	5 0	4 4	3 8	2 0	1 0
8	4 8	4 0	3 4	2 8	4 0	3 0	2 0	1 0	6 8	5 0	3 8	1 8	4 8	3 8	2 8	1 8	0 12	6 4	5 0	4 0	2 8	4 8	4 0	3 4	1 8	0 12
9	4 4	3 8	3 0	2 4	3 8	2 8	1 8	0 12	6 4	4 8	3 4	1 4	4 4	3 4	2 4	1 4	0 10	6 0	4 8	3 8	2 4	4 4	3 8	3 0	1 4	0 10
10	4 0	3 4	2 8	2 0	3 4	2 4	1 4	0 8	6 0	4 4	3 0	1 0	4 0	3 0	2 0	1 0	0 8	5 8	4 4	3 4	2 0	4 0	3 4	2 8	1 0	0 8
11	3 8	3 0	2 4	1 8	3 0	2 0	1 0	0 6	5 8	4 0	2 8	0 12	3 8	2 8	1 8	0 12	0 6	5 4	4 0	3 0	1 8	3 8	3 0	2 4	0 12	0 6
12	3 4	2 8	2 0	1 4	2 8	1 8	0 12	0 4	5 4	3 8	2 4	0 10	3 4	2 4	1 4	0 10	0 4	5 0	3 8	2 8	1 4	3 4	2 8	2 0	0 10	0 4
13	3 0	2 4	1 8	1 0	2 4	1 4	0 10	0 2	5 0	3 4	2 0	0 8	3 0	2 0	1 0	0 8	0 2	4 8	3 4	2 4	1 0	3 0	2 4	1 8	0 8	0 2
14	2 8	2 0	1 4	0 12	2 0	1 0	0 8	0 0	4 8	3 0	1 8	0 6	2 8	1 8	0 12	0 6	0 0	4 4	3 0	2 0	0 12	2 8	2 0	1 4	0 6	0 0
15	2 4	1 8	1 0	0 10	1 8	0 12	0 6		4 4	2 8	1 4	0 4	2 4	1 4	0 10	0 4		4 0	2 8	1 8	0 10	2 4	1 8	1 0	0 4	
16	2 0	1 4	0 12	0 8	1 4	0 10	0 4		4 0	2 4	1 0	0 2	2 0	1 0	0 8	0 2		3 8	2 4	1 4	0 8	2 0	1 4	0 12	0 2	
17	1 8	1 0	0 8	0 6	1 0	0 8	0 2		3 8	2 0	0 12	0 0	1 8	0 12	0 6	0 0		3 4	2 0	1 0	0 6	1 8	1 0	0 8	0 0	
18	1 4	0 12	0 6	0 4	0 12	0 6	0 0		3 4	1 8	0 10		1 4	0 10	0 4			3 0	1 8	1 0	0 4	1 4	0 12	0 6		
19	1 0	0 8	0 4	0 2	0 8	0 4	0 0		3 0	1 4	0 8		1 0	0 8	0 2			2 8	1 4	0 12	0 2	1 0	0 8	0 4		
20	0 12	0 6	0 2	0 0	0 6	0 2	0 0		2 8	1 0	0 6		0 12	0 6	0 0			2 4	1 0	0 8	0 0	0 12	0 6	0 2		
21	0 10	0 4	0 0		0 4	0 0			2 4	0 12	0 4		0 10	0 4				2 0	0 12	0 6		0 10	0 4	0 0		
22	0 8	0 2			0 2				2 0	0 10	0 2		0 8	0 2				1 8	0 10	0 4		0 8	0 2			
23	0 6	0 0			0 0				1 8	0 8	0 0		0 6	0 0				1 4	0 8	0 2		0 6	0 0			
24	0 4								1 4	0 6			0 4					1 0	0 6	0 0		0 4				
25	0 2								1 0	0 4			0 2					0 12	0 4			0 2				
26	0 0								0 12	0 2			0 0					0 8	0 2			0 0				
27									0 8	0 0								0 4	0 0							
28									0 4									0 0								
29									0 0																	

114. The rates for North Arcot rule lower than those sanctioned for Cuddapah and Coimbatore and the higher groups of Salem, and somewhat higher, as might be anticipated, than the rates for Chingleput, and generally higher than the rates for Nellore. The highest rates for he first three groups in the latter district and North Arcot are identical. On the whole the rates may, I hope, be deemed to be framed with moderation and suited to the circumstances of the district.

115. *Comparison of Proposed Rates with existing Rates of Assessment.*—The dry and wet rates of assessment at present in force, according to the revision effected in 1857 by Mr. Banbury, number thirty-seven dry and twenty-five wet rates as given in the annexed form. They refer to the prevailing land measure or cawny—1-32 acres :—

PRESENT RATES OF ASSESSMENT PER CAWNY—1-32 ACRES.

Dry Rates.									Wet Rates.					
Taram.	RS.	A.	Taram.	RS.	A.	Taram.	RS.	A.	Taram.	RS.	A.	Taram.	RS.	A.
1	6	...	14	2	4	27	...	13	1	10	...	14	4	12
2	5	...	15	2	2	28	..	12	2	9	8	15	4	8
3	4	8	16	2	...	29	...	11	3	9	...	16	4	4
4	4	...	17	1	14	30	...	10	4	8	8	17	4	...
5	3	12	18	1	12	31	...	9	5	8	...	18	3	12
6	3	8	19	1	10	32	...	8	6	7	8	19	3	8
7	3	4	20	1	8	33	...	7	7	7	...	20	3	4
8	3	...	21	1	6	34	..	6	8	6	8	21	3	...
9	2	14	22	1	4	35	...	5	9	6	...	22	2	12
10	2	12	23	1	2	36	...	4	10	5	12	23	2	8
11	2	10	24	1	...	37	...	3	11	5	8	24	2	4
12	2	8	25	...	15	...	...	...	12	5	4	25	2	...
13	2	6	26	...	14	...	...	...	13	5	...	...	...	...

116. The lowest of the dry rates are rarely met with and must apply to a very limited extent. In many villages the rates do not descend below one rupee a cawny, or 12 annas an acre. The lowest dry rate now proposed is 6 annas an acre, and the incidence of the proposals as regards the lower rates show that, notwithstanding the heavy excess in area determined by survey, the contemplated revision will lighten the assessment of the poorer soils and prove beneficial especially in respect to the large unoccupied waste area existing in most of the taluks.

117. The proposed rates per acre that are recommended in substitution of those per cawny above given aggregate only 11 dry and 18 wet rates as under :—

TABLE OF PROPOSED RATES AND NUMBER OF TARAMS.

Dry.		Wet.			
Taram.	Rate.	Taram.	Rate.	Taram.	Rate.
	RS. A. P.		RS. A. P.		RS. A. P.
1	3 8 0	1	8 0 0	10	4 8 0
2	3 0 0	2	7 8 0	11	4 4 0
3	2 8 0	3	7 0 0	12	4 0 0
4	3 0 0	4	6 8 0	13	3 12 0
5	2 4 0	5	6 0 0	14	3 8 0
6	1 12 0	6	5 8 0	15	3 4 0
7	1 6 0	7	5 4 0	16	3 0 0
8	1 0 0	8	5 0 0	17	2 8 0
9	0 12 0	9	4 12 0	18	2 0 0
10	0 8 0	...	...	...	...
11	0 6 0	...	...	...	...

118. Of the previous dry rates those above Rs. 4 applied only to the old garden land and in the table of rates are specified as "garden lands irrigated by baling." The lands under these exceptional tarams are mostly garden lands in the vicinity of villages and are limited in extent and now classed in like manner to the block in which situated. The highest ordinary dry rate now in force is therefore Rs. 4 per cawny, equivalent to Rs 3 per acre, which is identical with highest ordinary dry rate proposed according to the foregoing table, Taram IV.

119. When advocating the reduction and revision of the rates of assessment, both wet and dry, throughout the district—which measure was subsequently effected by Mr. Banbury in 1857—Mr. Bourdillon proposed "that the highest rate for one crop in this district should be Rs. 10 a cawny." This is equivalent to Rs. 7-8-0 the acre and tallies exactly with the highest rate now recommended for the second-class irrigation comprising river channels and river-fed tanks, and also tanks of large capacity and extensive drainage supply, likewise the best of the spring or kasam channels. In the first class the rate is 8 annas higher, or Rs. 8 per acre, but this supplies only to tanks well fed from the Pálár and Ponna Anicut channels, viz., the Kaveripak, Mahendravadi, Sholingapuram Kodakal, and other tanks at the head of the channels directly supplied from those works, which have thus been greatly improved by the construction of the anicuts—subsequent to Mr Bourdillon's report—at considerable cost by the State. It is hardly likely that even Mr. Bourdillon would have regarded a slightly higher rate as undesirable under circumstances so advantageous to the villages and lands benefited by the irrigation in question. Tanks indirectly fed by the anicut supply, or those that only receive water occasionally during the season, when the river may be well in flood and may have filled the tanks above, are rated under the second class. It will be seen that the area included under the first irrigation class is comparatively of limited extent and that, save in Chandragiri, the area classified under the highest wet rate in either the first or second class is of moderate extent and therefore not liable to any doubt.

Report to Board, No. 127, dated 23rd Oct. 1854, para. 36.

120. *Provision for Vicissitudes of Seasons.*—The deduction made on this account for both dry and wet in the foregoing calculations is 20 per cent., or one-fifth of the estimated produce of each class of soil. This allowance is liberal and is intended to include provision for any portion of either dry and wet holdings that may be uncultivable or unproductive from being used for any public purpose. Except where the area may be very insignificant, it will have been separated from the holding. In irrigated lands the provision is ample for all purposes, but should necessarily be allowed to meet the precariousness of seasons, the ravages of insects, and liability to blight to which wet crops are more or less subject at times.

121. *Proposals framed on the existing Wet and Dry Area.*—The proposals of this report refer to the area in occupation at the time of classification, when holdings were identified and registered. The fasli or revenue year appertaining to each taluk is noted marginally. The area standing in the revenue accounts of each as dry or wet is rendered accordingly in this report, and consequently the scheme of revision of assessment worked out thereon, by applying the rates of assessment now proposed to the area in occupation in each taluk at the time of classification, indicates what the effect of the revision would have been in respect to each taluk if then put in force without any changes or adjustments being made to the irrigated area, and also without any consideration or revision of the charge for second-crop irrigation. Throughout the proposals double-crop land has had one-third of the assessment deducted as the second-crop charge, and the two-thirds have been regarded as the charge for the first crop. The amount of the reduction for each taluk will be explained later on. For the purpose of showing the result of the proposed revision all wet land has thus been viewed as single crop. The adjustments to and from the wet area, which are likely to be very extensive in this district as regards the former, will be given effect to at the time of settlement, when also the area to be dealt with for second crop will be determined and disposed of. I shall have occasion to refer again to this.

Taluks.	Fasli.
Chandragiri	1280
Chittoor	1280
Gudiyátam	1282
Wálajápet	1287

122. *Talukwar Financial Results of the Proposals—Chandragiri.*—These are given for the Chandragiri Taluk in the following statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Account.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	
Dry	2nd Class	16,374	17,708	1 1 3	18,754	1 2 4	+ 1,046	+ 6
Wet ..	2nd Class	3,694	17,876	4 13 5	23,159	6 4 4	+ 5,283	+ 30
	3rd do.	1,797	7,528	4 3 0	9,466	5 4 4	+ 1,938	+ 26
	4th do.	272	865	3 3 0	1,136	4 2 10	+ 271	+ 31
	Total ..	5,763	26,269	4 8 11	33,761	5 13 9	+ 7,492	+ 29
	Total Dry and Wet .	22,137	43,977	1 15 9	52,515	2 5 11	+ 8,538	+ 19

123. The dry lands of the taluk have all been placed in the second class, and the proposals will raise the assessment from an average of Rs. 1-1-3 now paid per acre according to the survey area to Rs. 1-2-4, equivalent to an increase of 6 per cent., or Rs. 1,046. Of this amount, Rs. 155 accrues on the lands rated under Taram II, so that on the ordinary dry lands the enhancement is only Rs. 891. The addition mainly falls on the better qualities of soil, the proposals reducing the assessment on the poorer sorts of soil (*vide* Appendix A).

124. The irrigated lands are rated in the second, third, and fourth classes. The second class includes the bulk of the area, and the average rate per acre by survey will be increased from Rs. 4-13-5 to Rs. 6-4-4, or by 30 per cent., or Rs. 5,283. For the third and fourth classes Rs. 4-3-0 and Rs. 3-3-0 will be raised to Rs. 5-4-4 and Rs. 4-2-10, or by Rs. 1,938 and Rs. 271 respectively, equivalent to 26 and 31 per cent. On the whole the demand will exceed the former revenue by Rs. 7,492, or 29 per cent., the average rate rising from Rs. 4-8-11 to Rs. 5-13-9. On the revenue area the present assessment of the taluk averages Rs. 1-6-1 for dry and Rs. 5-7-3 for wet, the excess area by survey being 27 and 20 per cent. respectively. Compared with the average rate by the revenue area, the proposed rate shows a decrease of As. 3-9 in dry and an increase of As. 6-6 in wet. The enhancement in wet is largest on the better lands also.

125. *Chittoor.*—For Chittoor the results are as under:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	
Dry	2nd Class	71,440	68,716	0 15 5	75,461	1 0 9	+ 6,745	+ 10
Wet	1st Class	1,117	5,177	4 10 1	6,697	5 15 10	+ 1,520	+ 29
	2nd do.	8,944	41,602	4 10 5	51,184	5 11 6	+ 9,582	+ 23
	3rd do.	7,448	32,223	4 5 3	39,191	5 4 2	+ 6,968	+ 22
	4th do.	1,396	5,148	3 11 0	6,205	4 7 1	+ 1,057	+ 21
	Total ..	18,905	84,150	4 7 3	1,03,277	5 7 5	+ 19,127	+ 23
	Total Dry and Wet .	90,345	1,52,866	1 11 1	1,78,738	1 15 8	+ 25,872	+ 17

126. The dry lands of this taluk likewise fall in the second class. The present rate is As. 15-5 per acre by survey, the proposed rate Rs. 1-0-9, and the increase Rs. 6,745, or 10 per cent., of which Rs. 3,770 appertain to land classed under Taram II, so on the ordinary dry land the addition to the assessment is only Rs. 2,975, and this may be said to wholly apply to the better lands, the results (Appendix A) showing invariably more or less reduction on the poorer soil.

127. The wet lands are included in all four classes. Under the first class or Ponna Anicut irrigation the area is limited, and at present only pays Rs. 4-10-1 per acre by survey, and the proposed rate, Rs. 5-15-10, will add Rs. 1,520 to the assessment, or 29 per cent. For the second class the present rate is Rs. 4-10-5, that proposed Rs. 5-11-6, and the increase Rs. 9,582, or 23 per cent. For the third class similarly the rates are Rs. 4-5-3 and Rs. 5-4-2, augmenting the assessment by Rs. 6,968, or 22 per cent.; and for the fourth class Rs. 3-11-0 and 4-7-1, increasing the same by Rs. 1,057, or 21 per cent. For the whole taluk the present average rate per acre by survey, Rs. 4-7-3, will be raised to Rs. 5-7-5, equivalent to Rs. 19,127 enhancement of assessment, or 23 per cent. On the revenue area the taluk at present pays

Rs. 1-3-7 for dry and Rs. 5-4-11 for wet land per acre. The proposed rates thus exhibit a decrease of As. 2-10 per acre in dry and an increase of As. 2-6 in wet. The survey excess on the taluk averaged 27 per cent. in dry and 19 per cent. in wet land in occupation; hence the vast difference in the averages the land now pays per acre by the revenue and by the survey area.

128. *Gudiyátam.*—Like results for Gudiyátam are embodied in the annexed statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS	RS. A. P.	RS.	
Dry ..	1st Class	49,049	72,259	1 7 7	73,495	1 8 0	+ 1,236	+ 2
	2nd do.	23,951	26,631	1 1 10	21,769	0 14 7	− 4,862	− 18
	Total ..	73,000	98,890	1 5 8	95,264	1 4 10	+ 3,626	− 4
Wet ..	1st Class	1,016	4,128	4 1 9	5,800	5 11 4	+ 1,620	+ 39
	2nd do.	15,203	75,790	4 15 9	83,449	5 7 10	+ 7,659	+ 10
	3rd do.	3,320	14,656	4 6 8	15,948	4 12 10	+ 1,292	+ 9
	4th do.	469	1,954	4 2 8	1,789	3 13 0	− 165	− 8
	Total ..	20,008	96,580	4 13 3	1,06,986	5 5 6	+ 10,406	+ 11
	Total Dry and Wet.	93,008	1,95,470	2 1 8	2,02,250	2 2 10	+ 6,780	+ 3

129. The villages of this taluk are placed partly in the first and partly in the second class for dry. The present rates average per acre by survey for each class Rs. 1-7-7 and Rs. 1-1-10, those proposed Rs. 1-8-0 and As. 14-7, increasing the assessment of the first-class villages by Rs. 1,236, or 2 per cent, and diminishing that of the second-class villages by Rs. 4,862, or 18 per cent., being a net reduction on the taluk of Rs. 3,626, or 4 per cent. There is, however, an increase on the lands included in Taram II of Rs. 1,747, and, omitting this, there is a reduction on the ordinary dry lands of Rs. 5,373—Rs. 221 in the first and Rs. 5,152 in the second class. The assessment to be thus foregone mainly relieves the ordinary and the poorer qualities of soil (*vide* Appendix A).

130. The irrigated lands are placed in all four gradations. The area in the first class, supplied by the Ponna Anicut in the vicinity of Tiruvallam, is limited in extent. The present average rate is only Rs. 4-1-9 per acre by survey, that by the proposals Rs. 5-11-4, and the increase amounts to Rs. 1,620, or 39 per cent. For the second class the present rate is Rs. 4-15-9, that proposed Rs. 5-7-10, adding Rs. 7,659 to the revenue, or 10 per cent. In like manner for the third class the rates are Rs. 4-6-8 and Rs. 4-12-10, enhancing the demand by Rs. 1,292, or 9 per cent.; and for the fourth class Rs. 4-2-8 and Rs. 3-13-0, decreasing the same by Rs. 165, or 8 per cent. The average rate per acre for the whole taluk, at present Rs. 4-13-3 by survey area, will be raised to Rs. 5-5-6, or by Rs. 10,406, equivalent to 11 per cent. By the revenue area the present rates for the taluk average Rs. 1-7-11 for dry and Rs. 5-3-2 for wet. The proposed rates on the survey area are therefore As. 3-1 lower for dry and As. 2-4 higher for wet. The survey disclosed an average excess of 10 and 8 per cent., respectively, on the dry and wet lands in occupation.

131. *Wálajápet.*—Similar results for Wálajápet are furnished in the next statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS	RS. A. P.	RS.	
Dry ..	1st Class	17,367	20,119	1 2 6	22,277	1 4 6	+ 2,158	+ 11
	2nd do.	62,227	64,422	1 0 6	64,959	1 0 9	+ 537	+ 1
	Total ..	79,594	84,541	1 1 0	87,236	1 1 6	+ 2,695	+ 3
Wet ..	1st Class	12,474	54,610	4 6 1	67,460	5 6 6	+ 12,850	+ 24
	2nd do.	25,710	1,14,979	4 7 7	1,29,588	5 0 8	+ 14,609	+ 13
	3rd do.	11,803	44,776	3 12 8	52,780	4 7 7	+ 8,004	+ 18
	4th do.	2,077	7,328	3 8 5	8,724	4 3 2	+ 1,396	+ 19
	Total ..	52,064	2,21,693	4 4 2	2,58,552	4 15 5	+ 36,859	+ 17
	Total Dry and Wet.	131,658	3,06,234	2 5 3	3,45,788	2 10 0	+ 39,554	+ 13

132. In this taluk also the villages are rated for dry both under the first and second classes. Under the former, however, comparatively few villages are included. By survey area the present rates average for each class Rs. 1-2-6 and Rs. 1-0-6 per acre, and the proposed rates similarly Rs. 1-4-6 and Rs. 1-0-9, being an increase of Rs. 2,158, or 11 per cent. for the first class, and Rs. 537, or 1 per cent. for the second class. Excluding the increase resulting on Taram II, Rs. 1,789, the proposals involve an increase of Rs. 906, or 1 per cent. on the whole taluk, viz., Rs. 2,027, or 10 per cent. excess on the first-class villages, and Rs. 1,121, or 2 per cent. decrease on the second class. Throughout both classes the proposals more or less relieve the pressure of the assessment on the medium and poorer qualities of soil and augment the demand on the lower sorts. This may be observed from Appendix A.

133. The wet area of the taluk comprises all four classes of irrigation, and the bulk of the land rated under the first class or appertaining to anicut irrigation. The present rate thereon by survey is Rs. 4-6-1 per acre, that proposed is Rs. 5-6-6, or an increase in the assessment of Rs. 12,850, or 24 per cent. The second class is at present paying Rs. 4-7-7 per acre by survey and the proposed rate is Rs. 5-0-8, enhancing the demand by Rs. 14,609, or 13 per cent. Similarly the third and fourth classes pay at present Rs. 3-12-8 and Rs. 3-8-5, and the rate proposed is Rs. 4-7-7 and Rs 4-3-2, adding Rs. 8,004 and Rs. 1,396 respectively to the demand or 18 and 19 per cent. On the whole the wet assessment of the taluk will be raised by Rs. 36,859 or 17 per cent., the present rate per acre by survey being Rs. 4-4-2 and that proposed Rs. 4-15-5. The average rate by the revenue area is at present Rs. 1-3-2 for dry and Rs. 4-10-0 for wet, compared with Rs. 1-1-6 and Rs. 4-15-5 respectively by the proposals, or a decrease of As. 1-8 on the dry area and an increase of As 5-5 on the wet. The excess area by survey averages 13 per cent. on dry and 9 per cent. on the wet area.

134. *Total Results on four Taluks.*—On each class of dry and wet the total results of the four taluks are as under:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	
Dry ..	1st Class	66,416	92,378	1 6 3	95,772	1 7 1	+ 3,394	+ 4
	2nd do.	173,992	1,77,477	1 0 4	1,80,943	1 0 8	+ 3,466	+ 2
	Total ..	240,408	2,69,855	1 1 11	2,76,715	1 2 5	+ 6,860	+ 3
Wet ..	1st Class	14,607	63,967	4 6 1	79,957	5 7 7	+ 15,990	+ 25
	2nd do.	53,551	2,50,247	4 10 9	2,87,380	5 5 10	+ 37,133	+ 15
	3rd do.	24,368	99,183	4 1 2	1,17,385	4 13 1	+ 18,202	+ 18
	4th do.	4,214	15,295	3 10 1	17,854	4 3 10	+ 2,559	+ 17
	Total ..	96,740	4,28,692	4 6 11	5,02,576	5 3 1	+ 73,884	+ 17
	Total Dry and Wet.	337,148	6,98,547	2 1 2	7,79,291	2 4 11	+ 80,744	+ 12

135. The first-class dry villages average at present Rs. 1-6-3 per acre by survey, and it is proposed to fix the assessment at Rs. 1-7-1 per acre, or Rs. 3,394 and 4 per cent. in excess of the present demand. Similarly, the second-class villages pay Pies 4 per acre, and by the proposals the rate is Rs. 1-0-8, or Rs. 3,466 more than the existing assessment, equivalent to 2 per cent. For both classes the increase amounts to Rs. 6,860; but, as there is an excess on the lands rated as Taram II of Rs. 7,461, it follows that on the ordinary dry soils the net result of the proposals is a reduction of Rs. 602.

136. The rate of assessment that the lands under first-class sources of irrigation at present average by survey is Rs. 4-6-1 per acre, and by the proposals the same will be Rs. 5-7-7 per acre, occasioning an increase of Rs. 15,990, or 25 per cent. For the second class the present rate of Rs. 4-10-9 will be raised to Rs. 5-5-10, adding Rs. 37,133, or 15 per cent. to the demand; and for the third and fourth classes the present rates, Rs. 4-1-2 and Rs. 3-10-1, will be increased to Rs. 4-13-1 and Rs. 4-3-10 per acre, respectively, enhancing the revenue by Rs. 18,202 and Rs. 2,559, or 18 and 17 per cent. for each class. On the total wet area the proposals will modify the present rate of Rs. 4-6-11 per acre by survey area to Rs. 5-3-1 and increase the assessment now derived from the irrigated lands of these taluks by Rs. 73,884 or 17 per cent. The average rates paid at present for the whole of the four taluks is Rs. 1-5-0 per acre for dry and Rs. 4-14-8 for wet. By the proposals, therefore, the average rate on dry land will be As. 2-7 less, and for the wet lands As. 4-5 in excess of the foregoing rates. The increase by survey averages 17 per cent. on the dry area and 11 per cent. on the wet in occupation. On

both dry and wet an increase of Rs 80,744 results from the proposals, averaging 12 per cent. on the present assessment. Appendix A shows the variation by the proposals for each class and sort of soil for each taluk.

137. A further comparison is instituted for each taluk in respect to the incidence of the existing assessment on the basis of the revenue area and the proposed assessment on survey area :—

COMPARISON OF PROPOSALS ON REVENUE AND SURVEY AREA.

Taluks.	By Revenue Accounts.			By Proposals.			Difference.			
	Area.	Assessment.	Average.	Area.	Assessment.	Average.	Columns 2 and 5.	Percentage.	Columns 3 and 6.	Percentage.
1	2	3	4	5	6	7	8	9	10	11
Dry.	ACRES.	RS.	RS. A. P.	ACRES.	RS.	RS. A. P.	ACRES.	ACRES.	RS.	RS.
Chandragiri ..	12,851	17,709	1 6 1	16,374	18,754	1 2 4	+ 3,523	+ 27	+ 1,045	+ 6
Chittoor ..	56,176	68,716	1 3 7	71,441	75,462	1 0 9	+ 15,265	+ 27	+ 6,746	+ 10
Gudiyátam ..	66,222	98,890	1 7 11	73,000	95,263	1 4 10	+ 6,778	+ 10	+ 3,627	+ 4
Wálajápet ..	70,469	84,541	1 3 2	79,593	87,236	1 1 6	+ 9,124	+ 13	+ 2,695	+ 3
Total ..	205,718	2,69,856	1 5 0	240,408	2,76,715	1 2 5	+ 34,690	+ 17	+ 6,859	+ 3
Wet.										
Chandragiri ..	4,815	26,269	5 7 3	5,763	33,761	5 13 9	+ 948	× 20	+ 7,492	+ 29
Chittoor ..	15,852	84,150	5 4 11	18,905	1,03,278	5 7 5	+ 3,053	+ 19	+ 19,128	+ 23
Gudiyátam ..	18,581	96,550	5 3 2	20,008	1,06,946	5 5 6	+ 1,427	+ 8	+ 10,406	+ 11
Wálajápet ..	47,956	2,21,695	4 10 0	52,065	2,58,553	4 15 5	+ 4,109	+ 9	+ 36,858	+ 17
Total ..	87,204	4,28,694	4 14 8	96,741	5,02,578	5 3 1	+ 9,537	+ 11	+ 73,884	+ 17
Grand Total ..	292,922	6,98,550	..	337,149	7,79,293	..	+ 44,227	+ 15	+ 80,743	+ 12

138. The present and proposed average rates of assessment for each class of dry and wet are placed in juxtaposition for easy comparison in the annexed form :—

COMPARISON OF AVERAGE RATES OF ASSESSMENT, PRESENT AND PROPOSED, PER ACRE BY SURVEY.

Taluks.	Present or Proposed.	Dry Classes.			Wet Classes.				
		First.	Second.	Total.	First.	Second.	Third.	Fourth.	Total.
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Chandragiri ..	Present ..	..	1 1 3	1 1 3	..	4 13 5	4 3 0	3 3 0	4 8 11
	Proposed ..	..	1 2 4	1 2 4	..	6 4 4	5 4 4	4 2 11	5 13 9
Chittoor ..	Present ..	..	0 15 5	0 15 5	4 10 1	4 10 5	4 5 3	3 11 0	4 7 3
	Proposed ..	..	1 0 9	1 0 9	5 15 10	5 11 6	5 4 2	4 7 1	5 7 5
Gudiyátam ..	Present ..	1 7 7	1 1 10	1 5 8	4 1 9	4 15 9	4 6 8	4 2 8	4 13 3
	Proposed ..	1 8 0	0 14 7	1 4 10	5 11 4	5 7 10	4 12 10	3 13 0	5 5 6
Wálajápet ..	Present ..	1 2 6	1 0 7	1 1 0	4 6 1	4 7 7	3 12 8	3 8 5	4 4 2
	Proposed ..	1 4 6	1 0 9	1 1 6	5 6 6	5 0 8	4 7 7	4 3 2	4 15 5
Total ..	Present ..	1 6 3	1 0 4	1 1 11	4 6 1	4 10 9	4 1 2	3 10 1	4 6 11
	Proposed ..	1 7 1	1 0 8	1 2 5	5 7 7	5 5 10	4 13 1	4 3 10	5 3 1

139. The highest dry average rate at present is that of the first-class villages of Gudiyátam, the lowest that of the Chittoor second-class villages. The proposed highest and lowest dry rates are for the first and second class villages of Gudiyátam respectively. For the second-class villages the proposed rates for Chittoor and Wálajápet average the same, Rs. 1-0-9 per acre; that for Chandragiri is rather higher, Rs. 1-2-4; whilst for the limited number of villages rated as second class in Gudiyátam the average rate is only As. 14-7.

140. For wet, the average rate at present prevails highest throughout the second-class villages of Gudiyátam, Rs. 4-15-9, the like class for Chandragiri being but little less, Rs. 4-13-5. The other rates for the chief classes may be ranged in order as follows :—

			RS.	A.	P.
Chittoor ...	2nd Class	... ...	4	10	5
	1st do.	... ...	4	10	1
Wálajápet ...	2nd do.	... ...	4	7	7
Gudiyátam ...	3rd do.	... ...	4	6	8
Wálajápet ...	1st do.	... ...	4	6	1
Chittoor ...	3rd do.	... ...	4	5	3
Chandragiri .	3rd do.	... ...	4	3	0
Gudiyátam ...	1st do.	... ...	4	1	9

In Chittoor and Wálajápet the second-class rates now rule higher than those of the first class; whilst in Gudiyátam the first-class rates average less than the rates of the other three classes. By the revision proposed the average rate for the first-class irrigation exceeds that of the other classes in the same taluk. The rates descend gradually from Rs. 5-15-10 for Chittoor, Rs 5-11-5 for Gudiyátam, and Rs. 5-6-6 for Wálajápet for the first class, the average being slightly less for each lower class. Whilst thus regular in their incidence as regards each taluk, when compared one taluk with another, there is considerable disparity in the rates needing explanation.

141. For instance, the highest average wet rate does not appertain to first-class irrigation, but to the second-class irrigation of Chandragiri, viz., Rs. 6-4-4, which at first sight may appear singular. But it has to be borne in mind that the application of similar rates by classes to the classification of several taluks must necessarily produce somewhat different results in respect to average rates. The incidence of the classification varies in each, and the proportion of the different soils, good, medium, and indifferent, is a varying quantity. Thus, for the rich lands in Ghandragiri, assessed at second-class wet rates, a higher average rate results than for the first-class or anicut irrigation in the other three taluks which comprise relatively a greater percentage of soil of the lower qualities. This is in accordance with Mr. Banbury's experience when he carried out the revision of 1857; for, in sanctioning the proposals when submitted in detail, the Government remark, paragraph 2 of Extracts of Minutes of Consultation of 11th November 1857, No. 1,150 :—"The Additional Sub-Collector has now assimilated, as far as possible, the nunjah rates in these taluks with those in the others, and has convinced himself, by personal inquiry, that perfect equality in the mean rates of all the taluks is impracticable on account of the land being more fertile in some tracts than in others, thus the rates in Chandragiri and Chittoor are still higher than in the other taluks, on account of real local advantages possessed by those two taluks which render the imposition of a higher assessment reasonable." I was only aware of this after I had penned the preceding remarks.

142. *Area and Assessment of Unoccupied Land.*—The annexed abstract furnishes full particulars in this respect for both dry and wet and each class of villages :—

UNOCCUPIED AREA.

Taluks.	Dry.				Wet.			
	Class.	Survey Area.	Assessment.	Average Rate.	Class.	Survey Area.	Assessment.	Average Rate.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Chandragiri	2	13,066	9,362	0 11 6	2	605	2,725	4 8 0
	..	..	..	..	3	480	2,098	4 5 11
	..	..	..	..	4	66	276	4 3 9
Total ..	..	13,066	9,362	0 11 6	..	1,151	5,099	4 6 11
Chittoor	2	41,088	28,168	0 11 0	1	130	703	5 7 0
	..	..	..	..	2	1,277	6,020	4 11 5
	..	..	..	..	3	1,019	4,593	4 8 0
	..	..	..	..	4	419	1,555	3 11 5
Total ..	..	41,088	28,168	0 11 0	..	2,845	12,871	4 8 4
Gudiyátam	1	18,765	19,387	1 0 6	1	151	801	5 5 0
	2	8,025	5,316	0 10 7	2	2,255	9,690	4 4 9
	..	..	..	..	3	495	2,112	4 4 3
	..	..	..	..	4	128	403	3 2 4
Total ..	..	26,790	24,703	0 14 9	..	3,029	13,006	4 4 8

UNOCCUPIED AREA.

Taluks.	Dry. Class.	Dry. Survey Area.	Dry. Assessment.	Dry. Average Rate.	Wet. Class.	Wet. Survey Area.	Wet. Assessment.	Wet. Average Rate.
		ACRES.	RS.	RS. A. P.		ACRES	RS	RS. A. P.
Wálajápet	1	8,741	8,187	0 15 0	1	1,309	5,301	4 0 10
	2	50,014	33,756	0 10 10	2	2,082	9,300	3 10 6
	..	..	..	..	3	1,143	3,991	3 7 10
	..	..	..	..	4	135	433	3 3 8
Total ..	..	58,755	41,943	0 11 5	..	5,269	19,525	3 11 4
Total	1	27,506	27,574	1 0 0	1	1,590	6,805	4 4 6
	2	112,193	76,602	0 10 11	2	6,819	24,235	4 2 3
	..	..	..	..	3	3,137	12,794	4 1 3
	..	..	..	..	4	749	2,667	3 9 2
Total ..	..	139,699	1,04,176	0 11 11	..	12,294	50,501	4 1 8

143. The proportion that the occupied and unoccupied dry lands bear one to the other in each taluk, and a comparison of the proposed average rate of assessment for each head, is indicated in the subjoined statement:—

COMPARISON OF OCCUPIED AND UNOCCUPIED AREA.

Taluks.	Class.	Total Area.	Occupied Area. Area.	Occupied Area. Percentage.	Occupied Area. Average Rate.	Unoccupied. Area.	Unoccupied. Percentage.	Unoccupied. Average Rate.
		ACRES.	ACRES.		RS. A. P.	ACRES		RS. A. P.
Chandragiri	2	29,341	16,374	56	1 2 4	13,066	44	0 11 6
Chittoor	2	112,529	71,440	64	1 0 9	41,088	36	0 11 0
Gudiyátam	1	67,814	49,049	72	1 8 0	18,765	28	1 0 6
	2	31,976	23,951	75	0 14 7	8,025	25	0 10 7
Total ..	..	99,790	73,000	73	1 4 10	26,790	27	0 14 9
Wálajápet	1	26,108	17,367	67	1 4 6	8,741	33	0 15 0
	2	112,241	62,227	55	1 0 9	50,014	45	0 10 10
Total ..	..	138,349	79,594	58	1 1 6	58,755	42	0 11 5
Total	1	93,922	66,416	71	1 7 1	27,506	29	1 0 0
	2	286,087	173,992	61	1 0 8	112,193	39	0 10 11
Total ..	..	380,009	240,408	63	1 2 5	139,699	37	0 11 11

144. Of the assessed dry area, 37 per cent. is now unoccupied, and the extent may be regarded as considerable. From Appendix A it may be observed that the unoccupied lands are mainly rated under the medium and lower sorts of each class of soil, and as the proposed rates on these sorts invariably reduce the incidence of the present assessment for the lands in occupation, it follows that the assessment of the waste lands will similarly be reduced by the proposed settlement, and that consequently considerable impetus may be expected to be given to the extension of occupation. For each taluk the average rates for the waste approximate pretty closely to two-thirds of the rate on the occupied area. The percentage of the unoccupied area is least in the Gudiyátam Taluk, and the rate for the first-class dry villages is highest in that taluk. In explaining the classification I have mentioned, paragraph 44, that further inspection and revision will be necessary to the classification of this taluk, and the rating of these lands will then be closely scrutinized, and modified should there be occasion for revision.

145. Unoccupied wet area is equivalent to 13 per cent. of the total area assessed for wet. As explained at paragraph 121, the land thus exhibited as wet waste is the land so registered at present in the Revenue accounts. At settlement, when the changes from and to the irrigated area are considered, such waste lands will, to the extent that may be unirrigable, be adjusted to dry, and probably the acreage will be considerably diminished. The whole of this area cannot therefore be reckoned as likely to be hereafter occupied as wet. Compared with the average wet rates proposed for the land in occupation, those on the unoccupied area are moderate.

146. *Area and Assessment under each Money rate.*—Details in this respect for the occupied and unoccupied dry and wet area are furnished in the annexed form. The incidence of the assessment proposed on the unoccupied lands compared with those in occupation may be gathered from this abstract—

PERCENTAGE OF AREA ASSESSED AT EACH RATE.

Primary Taram.	Rate.	Occupied. Acres.	Occupied. Percentage.	Unoccupied. Acres.	Unoccupied. Percentage.	Total. Acres.	Total. Percentage.
	RS. A. P.	DRY.					
1	3 8 0	262	..	5	..	267	..
2	3 0 0	2,614	1	44	..	2,658	1
3	2 8 0	2,163	1	38	..	2,201	1
4	3 0 0	579	..	19	..	598	..
5	2 4 0	5,997	2	244	..	6,241	2
6	1 12 0	28,282	12	1,729	1	30,011	8
7	1 6 0	57,713	24	7,902	6	65,615	17
8	1 0 0	68,778	29	23,377	17	92,155	24
9	0 12 0	51,620	21	54,567	39	106,187	28
10	0 8 0	20,604	9	45,631	33	66,235	17
11	0 6 0	1,797	1	6,043	4	7,840	2
	Total ..	240,409	100	139,599	100	380,008	100
		WET.					
1	8 0 0	221	..	2	..	223	..
2	7 8 0	1,852	2	56	..	1,908	2
3	7 0 0	1,912	2	39	..	1,951	2
4	6 8 0	12,376	13	252	2	12,628	12
5	6 0 0	9,435	10	299	3	9,734	9
6	5 8 0	19,037	20	698	5	19,735	18
7	5 4 0	4,553	5	302	3	4,855	4
8	5 0 0	9,386	10	627	5	10,013	9
9	4 12 0	13,390	14	1,724	14	15,114	14
10	4 8 0	4,044	4	572	5	4,616	4
11	4 4 0	7,061	7	916	8	7,977	7
12	4 0 0	6,146	6	2,089	17	8,235	8
13	3 12 0	2,082	2	600	5	2,682	3
14	3 8 0	2,010	2	792	6	2,802	3
15	3 4 0	1,295	1	1,353	11	2,648	2
16	3 0 0	1,319	1	1,101	9	2,420	2
17	2 8 0	588	1	864	7	1,452	1
18	2 0 0	34	..	6	..	40	..
	Total ..	96,741	100	12,292	100	109,033	100

147. For the dry lands in occupation only 4 per cent. are assessed above Rs. 2 per acre, 40 per cent. above 1 rupee, 29 per cent. at rupee 1, and 31 per cent. at lower rates than 1 rupee. The unoccupied lands rated at more than 1 rupee per acre comprise 29 per cent; those at 1 rupee, 24 per cent.; and those less than 1 rupee, 47 per cent. Wet lands exceeding Rs. 6 per acre form 16 per cent. of the irrigated area; those above Rs. 5 being 47 per cent., and those at and below Rs. 5 per acre 53 per cent. The bulk of the area is well distributed between the various rates from Rs. 4 to Rs. 6-8-0 per acre.

148. *Application of proposals to Inam Lands.*—The dry and wet Inam area of each taluk, the gradations under which arranged, and the proposed assessment and average rate per acre for the dry and wet classes, are all specified in the subjoined statement:—

TOTAL INAM AREA INCLUDING SERVICE INAMS.

Taluks.	Dry. Class.	Dry. Survey Area.	Dry. Proposed Assessment.	Dry. Average.	Wet. Class.	Wet. Survey Area.	Wet. Proposed Assessment.	Wet. Average.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Chandragiri	2	12,552	10,423	0 13 4	2	2,121	13,877	6 8 8
	..	..	..	..	3	2,238	11,500	5 2 2
	..	..	..	..	4	183	941	5 2 0
Total ..	..	12,552	10,423	0 13 4	..	4,542	26,318	5 12 8

TOTAL INAM AREA INCLUDING SERVICE INAM

Taluks.	Dry. Class	Survey Area.	Proposed Assessment.	Average.	Wet. Class	Survey Area.	Proposed Assessment	Average.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Chittoor	2	18,120	18,506	1 0 4	1	123	771	6 4 4
	..	..	..	..	2	4,093	23,931	5 13 6
	..	..	..	..	3	3,672	19,498	5 5 0
Total ..	..	..	..	..	4	757	3,311	4 6 3
	..	18,120	18,506	1 0 4	..	8,645	47,511	5 7 11
Gudiyátam	1	8,184	11,902	1 7 3	1	322	1,953	6 1 1
	2	5,673	5,456	0 15 5	2	3,318	18,667	5 10 0
	..	..	..	..	3	757	3,786	5 0 0
Total ..	..	..	..	..	4	128	477	3 11 8
	..	13,857	17,358	1 4 1	..	4,525	24,883	5 8 0
Wálajápet	1	2,570	3,640	1 6 8	1	1,923	10,889	5 10 7
	2	7,234	6,647	0 14 8	2	4,194	22,245	5 4 10
	..	..	..	..	3	1,185	5,418	4 9 2
Total ..	..	..	..	..	4	112	476	4 4 0
	..	9,804	10,277	1 0 9	..	7,414	39,028	5 4 3
Total	1	10,754	15,542	1 7 2	1	2,368	13,613	5 12 0
	2	43,579	41,022	0 15 1	2	13,726	78,720	5 11 9
	..	..	..	..	3	7,852	40,202	5 1 11
Total ..	..	..	..	..	4	1,180	5,205	4 6 6
	..	54,333	56,564	1 0 8	..	25,126	1,37,740	5 7 9

149. Three-fifths of the dry Inam area appertain to the Chandragiri and Chittoor Taluks, where Kattubadi Inams still largely prevail in former Poliyam villages. Except in the second-class villages of Gudiyátam, and first class of Wálajápet, where the area is rather limited, the proposed average rates generally are slightly lower than for the occupied area of like classes. In Chandragiri the difference is rather considerable, very extensive tracts of scrub jungle forming part of some Inam holdings in a few villages of that taluk. These have been rated in the lowest taram, and help to reduce the average. The Inam dry area in the latter taluk is equal to three-fourths of the Government area in occupation. It is different in wet. The average rates are generally slightly higher than the corresponding averages of the lands in ordinary occupation. The exceptions are the 2nd class of Chandragiri, and the 4th class of Chittoor and Gudiyátam. Generally wet Inams occur in the better and ordinary qualities of soil.

150. *Detailed Description of Inam Area.*—Under the head of Inam, lands held at permanent or special rates, or on cowle for a term of years, have been included. Particulars of the actual extent of the Ordinary, Service, Tusdeek and Valavadi Inams are afforded in the following statement, as also of the other tenures enumerated. The Bagayat Poramboke lands are rent free, and formerly were the private property of the Nabob of the Carnatic and have passed by sale into other hands :—

Tusdeek Inam—Lands assigned in place of money payments to Pagodas.

DETAILS OF INAM AND OTHER AREAS INCLUDED THEREWITH.

	Chandragiri. Dry.	Chandragiri. Wet.	Chittoor. Dry.	Chittoor. Wet	Gudiyátam. Dry.	Gudiyátam. Wet.	Wálajápet. Dry.	Wálajápet. Wet.	Total. Dry.	Total. Wet.
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
Ordinary Inam	10,978	2,719	9,019	2,831	4,128	1,573	2,496	1,776	26,621	8,899
Service do.	1,574	714	7,529	2,717	6,755	1,621	6,785	4,902	22,643	9,954
Tusdeek do.	..	..	1,067	899	906	1,243	73	670	2,046	2,712
Valavadi do.	..	513	..	..	..	..	..	..	..	513
Dasabandam Inam	..	596	233	2,097	..	..	..	..	233	2,693
Total Inam proper ..	12,552	4,542	17,848	8,544	11,789	4,437	9,254	6,348	51,443	23,871
Government grants	..	..	89	47	..	..	..	4	89	51
Cowle or Rayamputta	..	..	183	54	..	..	..	..	183	54
Poramboke Bagayat	..	..	..	..	2,068	88	550	1,062	2,618	1,150
Total Special Tenures ..	..	..	272	101	2,068	88	550	1,066	2,890	1,255
Total ..	12,552	4,542	18,120	8,645	13,857	4,525	9,804	7,414	54,333	25,126

151. *Comparison of Assessment included in this Report with the Revenue Demand.*—The following statement furnishes full particulars in this respect. There is a slight difference, Rupees 180-2-0, which will be attended to at settlement. It appertains to no less than 593 villages by survey :—

Particulars.	Chandragiri, Fasli 1280.	Chittoor, Fasli 1280.	Gudiyátam, Fasli 1282.	Wálajápet, Fasli 1287.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Total Demand	53,773 4 10	1,73,986 14 7	2,13,696 15 9	3,17,931 15 2	7,59,289 2 4
Add.					
Transfers from other villages..	391 1 0	566 2 11	1,443 7 9	94 3 2	2,494 14 10
Omissions in addition	..	56 14 8	..	15 15 11	72 14 7
Total ..	54,164 5 10	1,74,610 0 2	2,15,040 7 6	3,18,042 2 3	7,61,856 15 9
Deduct.					
Second-crop Assessment ..	6,462 9 0	18,982 1 9	16,992 11 2	11,595 11 0	54,033 0 11
Omitted under Poramboke ..	434 9 1	1,742 2 8	795 1 5	..	2,971 13 2
Transfer to other villages ..	3,223 3 10	867 8 6	1,468 8 8	81 7 5	5,640 12 5
Excess in addition	1 8 3	32 13 10	..	..	34 6 1
Puttas not identificable ..	5 4 4	1 15 6	..	..	7 3 10
Assessment of lands in dispute settled to other villages ..	20 11 10	105 8 1	..	..	126 3 11
Lands needing to be identified at Settlement and now omitted	17 10 11	..	295 10 6	..	313 5 5
Total ..	10,165 9 3	21,732 2 4	19,551 15 9	11,677 2 5	63,126 13 9
Balance ..	43,998 12 7	1,52,877 13 10	1,95,488 7 9	3,06,364 15 10	6,98,730 2 0
Assessment included in this report	43,978 0 0	1,52,866 0 0	1,95,470 0 0	3,06,236 0 0	6,98,550 0 0
Difference to be adjusted at Settlement	20 12 7	11 13 10	18 7 9	128 15 10	180 2 0

152. *Assessment proportioned to Second-crop or Double-crop Lands.*—The foregoing statement shows the assessment deducted as the second-crop charge, alluded to at paragraph 121, to amount to Rs. 54,033. The deduction is largest in the Chittoor Taluk and least in Chandragiri; and allowing the present assessment of the consolidated or double-crop area to average about Rs. 7-8-0 per acre, or Rs. 5 for the first and Rs. 2-8-0 for the second crop, the above amount may be regarded as representing 21,613 acres of double-crop land out of a total area of 96,740 acres for the four taluks.

153. *Second-crop Assessment and Water-rate.*—Besides the sum just specified a greater or less amount is realized each year, according to the nature of the season, for second-crop cultivation on single-crop wet land. Details in this respect, and of water-rate levied for irrigation extended to dry land, is furnished for recent years, prior and subsequent to the famine, in the following table; first, for the four taluks under consideration; secondly, for the whole district :—

SECOND-CROP ASSESSMENT OF YEARS SPECIFIED.

Taluks.	1872-73. Second Crop.	1872-73. Water-rate.	1873-74. Second Crop.	1873-74. Water-rate.	1874-75. Second Crop.	1874-75. Water-rate.	1877-78. Second Crop.	1877-78. Water-rate.
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Chandragiri	3,532	5,240	3,200	4,498	3,931	6,377	3,335	2,929
Chittoor	14,128	16,101	11,715	12,338	16,592	18,808	10,599	8,220
Gudiyátam	11,921	17,025	8,221	13,308	11,500	20,806	9,953	5,666
Wálajápet	21,669	14,909	21,628	15,267	27,231	22,473	18,657	7,067
Total ..	51,250	53,275	44,764	45,411	59,254	68,464	42,544	23,882
Palmanér	2,879	1,665	1,350	1,710	2,897	2,942	2,402	1,182
Vellore	1,025	10,266	358	6,744	709	16,425	846	7,576
Arcot	565	10,329	314	6,855	675	15,926	557	1,932
Pólúr	8,332	4,463	657	8,306	4,431	14,567	1,082	7,705
Wandiwash	18,327	13,713	6,044	8,939	18,282	18,946	7,974	6,782
Total for District ..	82,378	93,711	53,487	77,965	86,248	1,37,270	55,405	49,059

154. During these years the second-crop assessment for the four taluks varied from Rs. 59,254 to Rs. 42,544, and the water-rate similarly from Rs. 68,464 to Rs. 23,882. Taking the second-crop assessment to average Rs. 2-8-0 per acre, the equivalent area would be about

23,700 acres; and supposing the extent paying water-rate to be all under paddy, then at the usual rate of Rs. 3-8-0 per cawny, or Rs. 2-10-0 per acre, the area would approximate to 26,082 acres. The charge for second crop on single-crop land in 1874-75 exceeded the second-crop assessment of the registered double-crop land of the four taluks, Rs. 54,033—*vide* paragraph 152. The very extensive revision that will be requisite to the wet area may be readily foreseen from these details. In 1874-75 the second-crop assessment and water-rate aggregated Rs. 2,23,518 for the whole district.

155. *Total probable increase of Assessment by Proposals.*—The increase indicated by the financial results for the four taluks, given at paragraph 134, assumes the whole of the wet area to be single crop only. Some further enhancement is sure to accrue on the lands at present double crop, the second-crop assessment of which, as above explained, needs to be taken as Rs. 54,033. And, as the proposals add 17 per cent. to the assessment for a single crop, it may fairly be concluded that the increase on the second-crop assessment will be a slightly higher rate, or 20 per cent. This will augment the estimated increase by Rs. 10,836; and the revision of the wet area will still further enhance this amount, for it has just been shown, paragraph 154, that probably considerable transfers from dry to wet will have to be effected at settlement; and as the lands concerned at present pay only a water-rate of Rs. 2-10-0 per acre for irrigation for paddy, the consolidated assessment on the same is sure to exceed the dry rate *plus* this amount. This may certainly be reckoned as not likely to amount to less than Rs. 8,447, which would raise the estimated increase to one lakh of rupees for the four taluks as under:—

Four Taluks.

Probable increase including second crop, &c.—

	Rs.
Proposed increase on dry	6,860
Do. do. on wet for one crop only	73,887
Estimated further increase for double-crop assessment ...	10,806
Do. increase from revision of irrigated area	8,447
Total ...	1,00,000

156. *Assessment of remaining five Taluks.*—The dry and wet assessment and average rate per acre for the five taluks to which it is contemplated to extend the proposals now submitted are detailed in the following statement:—

Taluks.	Wet.			Dry.		
	Revenue Area.	Assessment.	Rate per Acre.	Revenue Area.	Assessment	Rate per Acre.
	ACRES.	RS.	RS. A. P.	ACRES.	RS.	RS. A. P.
Palmanér	7,745	35,896	4 10 2	22,931	27,604	1 3 3
Vellore	13,981	93,352	6 10 10	46,110	82,241	1 12 6
Arcot	36,575	2,19,758	6 0 2	53,236	82,044	1 8 8
Pólúr	23,022	1,18,477	5 2 4	55,375	65,015	1 2 9
Wandiwash	36,025	2,13,822	5 14 11	76,163	1,07,207	1 6 6
Total ..	117,348	6,81,305	5 12 11	253,815	3,64,111	1 6 11

157. The dry rates average 1 anna 11 pies more than the like rates for the four taluks—*vide* paragraph 137. It seems likely that the application of the proposals will occasion some reduction in the present dry rates; for the Vellore and Arcot Taluks bear a high average rate at present, and the probability of an enhancement in respect to Palmanér, Pólúr, or Wandiwash appears slight. Whether the present rates are in any way burdensome can only be concluded after a further average rate on the survey area may be struck for each taluk. It is the same for wet; only a second element of uncertainty exists, and is likely to affect the average wet rates enumerated in the foregoing statement, viz., the rate being an average consolidated assessment throughout the last four of the taluks specified.

Paragraph 4.

At settlement the area irrigated for double crop will be defined and so charged, and the area not so irrigated as a rule will be rated as single crop only. The result may be anticipated to enhance the assessment on the former, or double crop, and on the whole possibly to diminish that of the lands to be classed hereafter as single crop. Any considerable disparity by survey, either a decrease or increase of area, would tend to a very similar result by settlement; but there is certainly a greater probability of an increase than decrease. I shall be in a better position to speak on this point when I submit the proposals in respect to the anicut villages of the Arcot

Taluk mentioned at paragraph 14. I am unable at present therefore to foresee that the revision of the other five taluks of the district would lead to more than a nominal increase on the present assessment, aggregating Rs. 10,45,416. With the revision of the wet area, it may I conjecture, be anticipated that an increase will result by the extension of the proposals as contemplated.

158. *Talukwar comparison of Assessment of Year of Classification with that of Fasli* 1288, (1878-79).—The annexed table institutes a comparison in this respect. Chandragiri, Chittoor, and Gudiyátam were classified before the famine, and Wálajápet subsequently:—

COMPARISON OF AREA IN OCCUPATION.

Taluks.	Fasli.	Dry.		Wet.		Total.	
		Area.	Assessment.	Area.	Assessment.	Area.	Assessment.
		ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
Chandragiri	1280 ..	13,068	19,121	4,872	34,652	17,940	53,773
	1288 ..	11,993	16,214	5,573	37,901	17,566	54,115
Difference ..		— 1,075	— 2,907	+ 701	+ 3,249	— 374	+ 342
Chittoor	1280 ..	57,163	69,556	16,189	1,04,442	73,352	1,73,998
	1288 ..	45,447	58,160	16,387	1,06,394	61,834	1,64,554
Difference ..		— 11,716	— 11,396	+ 198	+ 1,952	— 11,518	— 9,444
Gudiyátam	1282 ..	66,648	99,607	17,124	1,13,990	83,772	2,13,597
	1288 ..	60,436	92,335	18,904	1,14,977	79,340	2,07,312
Difference ..		— 6,212	— 7,272	+ 1,780	+ 987	— 4,432	— 6,285
Wálajápet	1287 ..	70,501	84,522	47,968	2,33,424	1,18,469	3,17,946
	1288 ..	70,192	84,019	46,473	2,26,732	1,16,665	3,10,751
Difference ..		— 309	— 503	— 1,495	— 6,692	— 1,804	— 7,195
Total		2,07,380	2,72,806	86,153	4,86,508	2,93,533	7,59,314
		1,88,068	2,50,728	87,337	4,86,004	2,75,405	7,36,732
Difference ..		— 19,312	— 22,078	+ 1,184	— 504	— 18,128	— 22,582

159. The occupation of Fasli 1288 (1878-79) was thus less than at the time of classification or rather of the year upon the accounts of which the identification and registration of holdings was then conducted by 18,128 acres of wet and dry, and Rs. 22,582 of assessment. In Wálajápet the falling off between 1877-78 and 1878-79 was 1,804 acres and Rs. 7,195, almost exclusively wet assessed land. In the other three taluks whilst an increase of 2,679 acres, assessed at Rs. 6,188, accrued on the wet area, dry land, amounting to 19,003 acres and bearing an assessment of Rs. 21,575, was relinquished; and doubtless much of this diminution in the dry area needs to be ascribed to land thrown up during the famine years, and not since reoccupied. The relinquishment of dry land is most extensive in Chittoor. Throughout all the three taluks it may fairly be surmised that the dry land thus parted with is of ordinary or indifferent quality, the assessment on which will be ameliorated by the present proposals; and therefore that some portion of the proposed decrease on dry land is merely nominal the land no longer being in occupation. Probably the introduction may eventuate in a slightly higher percentage of increase for dry land than that now shown, should the lands meanwhile continue unoccupied.

160. *Incidence of the Revision of Assessment on Dry and Wet Lands as regards villages.*—Particulars in this respect will be found in the annexed statement. The four taluks comprise altogether 593 villages; and in 571 of the villages both dry and wet assessed lands exist, whilst 20 villages are wholly dry, and two others are entirely under irrigation :—

Increase or Decrease.	Percentages.	Dry. Number of Villages.	Dry. Assessment. Present.	Dry. Assessment. Proposed.	Dry. Difference	Dry. Percentage.
1	2	3	4	5	6	7
			Rs.	Rs.	Rs.	
Increase	Below Rs. 10	119	58,918	61,870	2,952	5
	From „ 10 to 25	114	44,336	52,238	7,902	18
	„ „ 25 to 50	73	25,663	34,833	9,170	36
	„ „ 50 to 75	17	5,860	9,494	3,634	62
	„ „ 75 to 100	3	421	781	360	86
	Upwards of Rs. 100	..	..	..	..	..
	Total ..	326	1,35,198	1,59,216	24,018	18
Decrease	Below Rs. 10	118	65,030	61,676	3,354	5
	From „ 10 to 25	112	54,591	45,289	9,302	17
	„ „ 25 to 50	35	15,036	10,434	4,502	30
	Total ..	265	1,34,657	1,17,499	17,158	13
	Grand Total ..	591	2,69,855	2,76,715	+ 6,860	+ 3

Increase or Decrease.	Percentages.	Wet. Number of Villages.	Wet. Assessment. Present.	Wet. Assessment. Proposed.	Wet. Difference.	Wet. Percentage.
8	9	10	11	12		
			Rs.	Rs.	Rs.	
Increase	Below Rs. 10	110	92,963	98,132	5,169	6
	From „ 10 to 25	203	1,68,670	1,97,468	28,798	17
	„ „ 25 to 50	151	1,03,760	1,39,310	35,550	34
	„ „ 50 to 75	27	7,895	12,470	4,575	59
	„ „ 75 to 100	8	2,253	4,175	1,922	85
	Upwards of Rs. 100	4	655	1,467	812	124
	Total ..	503	3,76,196	4,53,022	76,826	20
Decrease	Below Rs. 10	48	43,477	41,739	1,738	4
	From „ 10 to 25	18	8,816	7,682	1,134	13
	„ „ 25 to 50	4	203	133	70	34
	Total ..	70	52,496	49,554	2,942	6
	Grand Total ..	573	4,28,692	5,02,576	+ 73,884	+ 17

161. The dry lands concern 591 villages, and for 326 of these the proposals result in an average increase of 18 per cent. or Rs. 24,018; whilst on the other 265 villages the result is a decrease of 13 per cent. or Rs. 17,158. The present assessment of the villages in either case is much the same—close upon Rs. 1,35,000 in round numbers—so that upon one half of the present assessment by villages there is a reduction by the proposals, and on the other half an increase. On the total there is an increase of Rs. 6,860 or 3 per cent.

162. Of the 573 villages having irrigation, the proposals will increase the assessment of the wet area of 503 villages by 20 per cent. or Rs. 76,826, and reduce that of 70 villages by 6 per cent. or Rs. 2,942; the result for the whole being an increase of 17 per cent. or Rs. 73,884. The decrease applies to about one-eighth of the present wet assessment.

163. This comparison is extended to the different taluks in the subjoined table as regards both dry and wet :—

Taluks.	Particulars.	Villages.	Assessment. Present.	Assessment. Proposed.	Difference.	Percentage.
			Rs.	Rs.	Rs.	
			Dry.			
Chandragiri	+	32	9,777	11,422	1,645	17
	−	21	7,931	7,332	599	8
Total ..		53	17,708	18,754	+ 1,046	+ 6
Chittoor	+	90	41,805	51,760	9,955	24
	−	45	26,911	23,701	3,210	12
Total ..		135	68,716	75,461	+ 6,745	+ 10
Gudiyátam	+	82	37,503	42,576	5,073	14
	−	91	61,387	52,688	8,699	14
Total ..		173	98,890	95,264	— 3,626	— 4
Wálajápet	+	122	46,113	53,458	7,345	16
	−	108	38,428	33,778	4,650	12
Total ..		230	84,541	87,236	+ 2,695	+ 3
			Wet.			
Chandragiri	+	46	24,820	32,380	7,560	30
	−	2	1,449	1,381	68	5
Total ..		48	26,269	33,761	+ 7,492	+ 29
Chittoor	+	127	80,222	99,532	19,310	24
	−	7	3,928	8,745	183	5
Total ..		134	84,150	1,03,277	+ 19,127	+ 23
Gudiyátam	+	131	79,045	90,556	11,511	15
	−	31	17,535	16,430	1,105	6
Total ..		162	96,580	1,06,986	+ 10,406	+ 11
Wálajápet	+	199	1,92,109	2,30,554	38,445	20
	−	30	29,584	27,998	1,586	5
Total ..		229	2,21,693	2,58,552	+ 36,859	+ 17

164. For dry, more than half the villages of Gudiyátam, nearly half of those of Wálajápet, more than one-third of those of Chandragiri, and just one-third of those of Chittoor will obtain a reduction of assessment by these proposals. The decrease therefore is well distributed amongst the several taluks. For wet, the reduction is almost exclusively confined to villages of the Gudiyátam and Wálajápet Taluks, and the amount is very moderate. These details will enable the probable effect of the scheme as submitted to be more clearly understood, more especially when viewed in conjunction with the next statement.

165. *Comparison of Present and Proposed Assessment as regards each Money-rate.*—The following enumerates this comparison for the dry and wet rates separately, and further elucidates the incidence of the present proposals :—

Primary Taram.	Rate.	Area in Occupation. Survey Area.	Revenue Assessment.	Proposed Assessment.	Difference.	Percentage.
	Rs. A. P.	Acres.	Rs	Rs.	Rs	
1	3 8 0	263	388	918	+ 530	+ 137
2	3 0 0	2,614	3,801	7,844	+ 4,043	+ 106
3	2 8 0	2,162	2,519	5,407	+ 2,888	+ 115
4	3 0 0	578	1,156	1,735	+ 579	+ 50
5	2 4 0	5,997	11,043	13,494	+ 2,451	+ 22
6	1 12 0	28,283	44,495	49,494	+ 4,999	+ 11
7	1 6 0	57,713	74,521	79,356	+ 4,835	+ 6
8	1 0 0	68,778	72,233	68,778	— 3,455	— 5
9	0 12 0	51,619	44,449	38,714	— 5,735	— 13
10	0 8 0	20,604	14,262	10,302	— 3,960	— 28
11	0 6 0	1,797	988	673	— 315	— 32
Total ..	..	240,408	2,69,855	2,76,715	+ 6,860	+ 3
Wet.						
1	8 0 0	221	1,189	1,770	+ 581	+ 49
2	7 8 0	1,853	10,504	13,893	+ 3,389	+ 32
3	7 0 0	1,912	10,310	13,383	+ 3,073	+ 30
4	6 8 0	12,375	66,210	80,445	+ 14,235	+ 22
5	6 0 0	9,436	45,117	56,612	+ 11,495	+ 25
6	5 8 0	19,037	92,061	1,04,706	+ 12,645	+ 14
7	5 4 0	4,553	19,275	23,904	+ 4,629	+ 24
8	5 0 0	9,386	40,005	46,928	+ 6,923	+ 17
9	4 12 0	13,389	57,484	63,601	+ 6,117	+ 11
10	4 8 0	4,044	14,829	18,199	+ 3,370	+ 23
11	4 4 0	7,062	26,615	30,009	+ 3,394	+ 13
12	4 0 0	6,146	22,564	24,585	+ 2,021	+ 9
13	3 12 0	2,082	6,669	7,906	+ 1,237	+ 29
14	3 8 0	2,010	6,130	7,037	+ 907	+ 15
15	3 4 0	1,295	4,127	4,207	+ 80	+ 2
16	3 0 0	1,818	3,835	3,954	+ 119	+ 3
17	2 8 0	587	1,746	1,469	— 277	— 16
18	2 0 0	34	122	68	— 54	— 44
Total ..	..	96,740	4,28,692	5,02,576	+ 73,884	+ 17
Grand Total ..	..	337,148	6,98,547	7,79,291	+ 80,744	+ 12

166. Primary tarams 1 to 3 in dry relate to lands exceptionally treated on account of the facility with which water can be secured; and though the enhancement exceeds cent. per cent., there can be no question as to the propriety of thus treating and rating these lands which are invariably double crop and sometimes two crops of paddy. Ordinary dry lands, tarams 4 to 11, vary from + 50 to — 32 per cent.; and it should be noticed that tarams 4 to 7 occasion an increase, and tarams 8 to 11 a decrease; and that the increase in one case and the decrease in the other is marked by singular regularity of progression. The increase appertains wholly to the better quality of soils, being most for the lands rated in the highest taram 4; and the decrease is distributed over the medium and poorer qualities of soil and is largest for the very poorest soil, taram 11. In wet there is an increase greater or less under each taram, save the two last, 17 and 18, which exhibit a decrease. The heaviest enhancement is mostly on the higher tarams, but the percentage varies greatly for the medium and lower tarams, and any particular uniformity in this respect could not be expected.

167. In reviewing these proposals, I request that the circumstances under which the present assessment had their origin, some 75 years ago, and have since been modified, may be borne in mind. In 1829, Mr. Nisbet "pronounced the pymaish rates to be most unequal," and down to 1854, when Mr. Bourdillon submitted his report for a general reduction of the rates of assessment, pending a regular survey and assessment being undertaken, the inequalities of the then prevailing assessment would appear to have been acknowledged by the Collectors. Mr. Bourdillon's scheme of reduction—a measure eminently beneficial to the district—was a temporary expedient that has now had force for three and twenty years. The manner in which given effect to is explained at paragraphs 6 to 8, and though altering the incidence of the assessment materially, especially on the more highly-rated lands, and thus decreasing the inequalities in some measure, it tended to enhance the same in a greater degree on the more leniently rated lands, and consequently remarkable unevenness in the present assessment is met with in many villages, the full extent of which is rarely realized save by a settlement officer whose avocation takes him day by day to

different villages, and acquaints with the real incidence of the assessment. The variation by survey has tended in some measure to still further reduce inconsistencies of assessment, and sometimes to give greater prominence to the same. The reductions of 1857 seemingly applied to all villages indiscriminately—a village with high rates of assessment securing a greater abatement than one with moderate and low rates. Hence it is that, whilst many villages are still rated excessively, others are extraordinarily lowly assessed. It may, I think, be further considered by the light thrown upon the existing assessments by the statement at paragraph 165, that upon the lower class of dry soil the reduction of 1857 was inadequate. It left the inferior soils unduly burdened when compared with those of higher productive power.

168. The present scheme has been framed, as intended by the original constitution of the settlement, to redress these admitted inconsistencies in the present land assessment, the non-recognition of which would tend to frustrate the main object of the revision now being undertaken, and I would fain hope that my proposals may be accepted as satisfactorily attaining this purpose.

169. *Anicut Irrigated Villages.*—These exist principally in the Wálajápet Taluk. Nominally 74 villages are now returned in the Revenue accounts as irrigated under the Pálár anicut in that taluk, but examination has shown the number to be really 62 villages, as 12 of those so returned do not receive any anicut supply in respect to the registered wet land of the villages. In some there is a slight area under water-rate from anicut irrigation, but the real sources of supply of the villages are unconnected with the anicut. In the 62 villages thus regarded as anicut supplied by these proposals, only some of the sources of irrigation are so fed. Under the Ponna anicut 58 villages were found to be irrigated in the same taluk, and in these villages likewise the anicut supply does not extend to all the sources. The method of classing the sources of irrigation, both anicut supplied and the more ordinary rain-fed, is fully explained at paragraph 49. Particulars of the classing adopted for the anicut villages of Wálajápet, under both the Pálár and Ponna anicuts, are afforded in the following statement, the anicut and other irrigation being separately enumerated:—

Details of Irrigation.	Class.	Pálar Anicut, 62 Villages. Tanks.	Weirs.	River Channels.	Spring Channels.	Drainage.	Total.	Ponna Anicut, 58 Villages. Tanks.	Weirs.	River Channels.	Spring Channels.	Drainage.	Total.
Anicut	1	43	5	3	5	..	56	14	1	3	..	..	18
	2	48	2	4	2	1	57	60	3	10	2	2	77
	3	2	..	..	..	..	2	3	..	1	..	..	4
	4	..	1	..	..	..	1	..	..	..	..	..	..
Total ..		93	8	7	7	1	116	77	4	14	2	2	99
Non-Anicut	1	..	..	..	..	..	..	..	..	..	..	..	..
	2	3	1	2	7	..	13	2	..	..	1	..	3
	3	5	..	..	1	3	9	19	..	..	3	1	23
	4	11	..	..	..	..	11	14	1	..	..	2	17
Total ..		19	1	2	8	3	33	35	1	..	4	3	43

170. Under the Pálár anicut 56 sources are rated in the first class, 57 in the second, 2 in the third, and 1 in the fourth. The latter is a nominal entry, as the source is ineffective at present and probably will need to be removed at settlement. Under the Ponna anicut there are only 18 first class sources, no less than 77 being in the second class, whilst 4 others are third class. Most of the tanks under the latter anicut are indirectly fed, and do not, as a rule, receive any supply until late in the season. The cause for river and spring channels being included under anicut irrigation is explained at paragraph 57.

171. The foregoing irrigation from the Ponna anicut depends on the main channel taking off from the left bank of the river. A smaller channel takes off on the right bank and irrigates 6 villages in Chittoor Taluk and 7 in Gudiyátam, the number of sources supplied being 18 and 14 respectively. These are rated in the first class.

172. *State of Irrigation Works.*—By arrangement with the Collector, reports have been submitted to him as to repairs and other work required to the several sources of irrigation inspected by the Assistant Director or by myself for the purpose of classing the same whilst engaged in the examination of villages of the several taluks. The operation has extended as yet only to the Chandragiri, Chittoor, and Wálajápet Taluks. The latter has been fully reported on, but the inspection of some villages in the two taluks first named has been deferred, and consequently further reports have yet to be made to complete these taluks.

173. Notwithstanding the expenditure from Famine funds during later years, many of the more ordinary tanks, especially in the Wálajápet Taluk, are more or less in a very dilapidated condition and have not seemingly had any expenditure incurred on them for years. The larger and more important tanks are generally in moderate order, but more attention is requisite to the maintenance of the ordinary rain-fed tanks and several of those included as either Pálár or Ponna anicut fed. The projected improvement of the irrigation on the northern or left bank of the Pálár, reported on during the famine by Mr. J. W. Rundall, will be a great boon to many of the so-called anicut villages which at present have their supply supplemented more or less precariously in some cases from the anicut irrigation. I have been unable to ascertain as yet from the Department of Public Works the villages or sources likely to be benefited by the project when it may be practicable to continue and complete the scheme. The irrigation from the Ponna anicut, probably the most effective of the two, similarly needs to be systematized, as a few large tanks into which the channels first discharge monopolized the whole of any small supply the channel may convey when the river is not in flood, and water is only passed to the numerous tanks below after the said large tanks may have nearly filled. In fact, the tanks below rarely receive any supply until the burst of the north-east monsoon. This explains why so few tanks under the Ponna anicut are graded in the first class. If the irrigation from these anicuts is improved and better distributed, some of the sources at present rated as second class could be raised to first class. The instructions of Government, reserving the right of modifying the wet rates of assessment to a higher class in such cases, when the irrigation may be improved subsequent to settlement, will have due attention at the introduction.

G.O., No. 2,095, dated 25th June 1877.

174. An abstract of the number of villages and sources for which reports were submitted to the Collector is furnished below, specifying the number of sources reported for repair and for removal from the present list of sources according to the Revenue accounts :—

Taluks.	Number of Villages reported on.	Reported for Repairs.							Reported for removal from list of Sources.						
		Government				Dasabandham			Government				Dasabandham.		
		Tanks.	River Channels.	Spring Channels	Weirs.	Tanks.	River Channels.	Spring Channels.	Tanks.	River Channels.	Spring Channels.	Weirs.	Tanks.	River Channels	Spring Channels.
Chandragiri	26	33	8	5	..	21	1	..	1	4	2	..	..	1	..
Chittoor	52	53	18	2	..	62	3	1	12	2	..	..	11	1	2
Wálajápet	192	253	4	9	5	3	..	..	21	..	1	..	..	..	..
Total ..	270	339	30	16	5	86	4	1	34	6	3	1	11	2	2

175. The reports furnished relate to 270 villages and detail 390 Government and 91 Dasabandham sources for repair, and 44 Government and 15 Dasabandham sources for omission as separate sources for the future. In both respects the proposals are now under consideration, and to some extent have already been replied to. Small tanks and other sources ruined since many years are still retained in the accounts, and, so far as the Revenue Officers concur, these will be removed at settlement, and the area will be adjusted to dry or registered under the sources from which supplied, if otherwise irrigated. Similarly, small ponds, on which it is undesirable any outlay for repairs should be incurred, are now registered as the sources of irrigation for lands mainly deriving their supply from ordinary tanks and channels. These in like manner will be omitted, and the area registered under the source from which the lands may be mainly fed.

176. *Dasabandham Tanks.*—As I examined almost all the Chandragiri and Chittoor villages to which the Dasabandham sources referred to may appertain, and found no occasion to report at all in respect to several villages, I am in a position to record my opinion that the bulk of the Dasabandham sources are fairly maintained; they are usually on a par with the Government sources. Altogether there are 435 Dasabandham sources in the two taluks in question, and the proportion likely to be reported for attention will probably be about one-fourth. I observed repairs to be mostly required in cases where the Dasabandham might pertain to several shareholders. I consider that the system might be extended to many of the petty sources of irrigation with advantage to the State.

177. *Past Outlay on Irrigation Repairs.*—It appears from the District Manual that the expenditure on irrigation works, exclusive of the cost of establishment, amounted to Rs. 14,86,751 during the ten years marginally enumerated, including the heavy expenditure during the famine, or an average of Rs. 1,48,675 annually. The assessment on irrigated land during Fasli 1288 (1878-79), including the charge for water-rate and second crop, aggregated Rs. 13,24,034. Now that the supervision of repairs by the Public Works Department has been withdrawn from several taluks of the district, other arrangements are requisite for the due maintenance of the numerous works of irrigation in which the Government are so largely interested. A fixed assignment of the irrigation assessment of the works excluded from the control of the professional department would certainly best provide for the upkeep of the large number of sources of irrigation requiring attention.

Year.	Expenditure on Irrigation.
	Rs.
1869-70	91,664
1870-71	1,24,130
1871-72	70,978
1872-73	1,36,419
1873-74	1,60,518
1874-75	1,81,426
1875-76	3,39,773
1876-77	1,68,623
1877-78	1,97,317
1878-79	15,903
Total ..	14,86,751

178. *Proposals to apply previously-sanctioned Schemes or Table of Money-rates to Districts to be newly settled without the submission of any fresh Scheme.*—This proposal, which was considered in the note by Mr. Wilson, the late Director, printed with Board's Proceedings, No. 2,473, of 28th August 1879, was left to be dealt with when the North Arcot scheme might be placed before the Board. The suggestion might perhaps be acted on without any very great deviation from the principles upon which the resettlement of the land assessment is conducted in some cases, but not generally. For instance, the present proposals embrace a large portion of the original southern division of Arcot, paimaished formerly under that district, viz., the Vellore, Arcot, Pólúr, and Wandiwash Taluks. Should the proposals prove suitable to the circumstances of those taluks, and moreover should the average of prices during the prescribed twenty years on which the settlement commutation rate is based, approximate at all closely to the rates adopted for North Arcot, then the scheme now rendered might, under these circumstances, be regarded as appropriate and extended to the South Arcot District also. Time will show this, when the taluks named are dealt with. If the average prices ruling in South Arcot vary in any marked degree from those now recommended for this district, the present scheme should certainly be regarded as unsuited to South Arcot. The commutation rate is the chief factor in any scheme of settlement, and this was prominently recognized in the discussion on the Salem and Tinnevelly Settlements. The suggestion appears practicable of adoption only in respect to districts in which there may be equality in respect to the prices of grain and which may otherwise be regarded as very similarly circumstanced, which rarely happens.

179. If the sanctioned schemes already existing are likely to suffice for the requirements of districts to be hereafter settled, then it is only reasonable to conclude that one or other of the schemes would prove suitable to North Arcot. Having now had many years' experience of this district, I am convinced that none of the previously-sanctioned schemes could be so adopted. In fact, only two could possibly be considered for the purpose—the Chingleput and Coimbatore schemes—for all others are wholly inapplicable or vary in respect to the standard classification table as regards the number of sorts under each class of soil. The two schemes cited require to be rejected for the purpose, because (1) the commutation prices come out much lower, and (2) the grain values or produce of wet land have been determined to rule very much higher in North Arcot. There may be uniformity between portions of the present scheme and other schemes, but regarded as a whole very considerable variation exists.

180. The change would, as Mr. Wilson points out, lead to the adoption, not of any existing or sanctioned scale in its entirety, but of an arbitrary scale or table of rates similar to that furnished with the communication referred to. Working to such a table, classification would be apt to degenerate into a mere adjustment of the present assessments, conducted more with reference to what the land may at present be paying, than the recognized value or quality of the soil. The usual course, as in the settlement of this district, is for the rates proposed to be determined upon the results of the classification; applying the commutation rate to the grain values as estimated for the several classes and qualities of soil, the classification proceeding mainly upon the quality that many years' experience may indicate as assignable to each kind of soil dealt with, modified in some measure in the case of irrigated lands by the level or facility of the supply of irrigation. By this means relative uniformity between one village and another is secured; and with the classification blocked out it can be readily ascertained from the villagers in most cases, whether the treatment of the village is in consonance with their experience and views. This information is usually afforded with but little reticence, and is of much value.

181. Until a sufficient portion of a district has been classified, the circumstances of the irrigation may be known, and the actual assessment upon the survey area worked out, and as well the other settlement calculations made, it is hardly possible to determine with any degree of certainty or utility what the assessment might appropriately be. In Mr. Wilson's note he remarked "that a wet scale having for its highest limit Rs. 10 would not satisfy the requirements of the best lands under the Pálár and Ponna anicuts in North Arcot * * * which are quite as able to bear rates of Rs. 12 and 10-8-0 as the Bhaváni channel lands of Coimbatore and the Támbraparni valley of Tinnevelly." With the light which the details of the scheme of settlement afford on the subject, it will be seen that the commutation price for North Arcot for paddy, Rs. 95, is just three-fourths of that of Coimbatore, Rs. 126; and that in place of the highest rate for the anicut irrigation of North Arcot being above Rs. 10 per acre, it is less or Rs. 8; and that whilst very little area falls under this rate, it enhances the present assessment by 49 per cent. It would be impolitic, in my opinion, to fix any higher rate under the circumstances.

Statement at paragraph 165.

182. But few districts remain to be newly taken up for settlement—South Arcot, Madura, and Bellary—and it would seem unwise to so far alter the basis of the settlement for these districts as the proposition made and now awaiting consideration would appear to contemplate. Any settlement affected on an arbitrary or discretionary table of rates based on the experience of other settlements, and not on a separate scheme founded on the commutation rate and general characteristics of the district concerned, would eventually, at the termination of the first period of settlement, lead to difficulties and complications; for it would not be possible to revise the same in conformity with any modification of the commutation price for a fresh series of years, and probably a further discretionary element would have to be imported into the revision of the settlement.

183. *Composition for Second Crop at Settlement.*—In dealing with second crop at the introduction of settlement, in conformity with G.O., No. 830, dated the 14th July 1874, I would request that composition for a second crop on wet land may be sanctioned for this district at the same rates as for Cuddapah, viz., one-third, one-fourth, and one-fifth of the single-crop assessment. Under many of the minor and precariously-fed sources of irrigation of this district, a crop of ragi is first raised, more or less with the aid of wells, without which two crops would not be possible. Very often the wells are also the means of securing the paddy crop which follows. I should prefer to be able to treat such lands where requisite with the same liberality as allowed for the Cuddapah District.

184. *Future charge for Water-rate.*—With introduction of the revised assessment and the displacement of the cawny, the present unit of measurement, by the acre, I would suggest that the special water-rate of Rs. 3-8-0 per cawny, now uniform throughout the district, should be rescinded, and that the charge should conform with that prevailing in the neighbouring settled districts and detailed in Board's Standing Order No. 5.

185. *Lifted Irrigation.*—The area of lifted irrigation is unimportant, but it is proposed to allow the usual abatement of one rupee per acre.

186. *Increase of Assessment to be levied by increments.*—I would request that the course adopted in the recent settlements of other districts in this respect may be approved for North Arcot.

187. *Measurement of minor holdings of Survey Fields.*—The necessity for this measure is explained at paragraph 25, and in conformity with representations made the operation has been undertaken in Wálajápet, and the greater portion of the taluk has been completed as an experiment. It is feared, however, that the reduced allotment of the department will not admit of the operation being extended and continued in other taluks. The omission of this essential detail, in a district where the revenue and survey areas are so diverse, would inevitably occasion considerable dissatisfaction among the occupants of land, and be likely to mar much of the good effect that may otherwise be anticipated from the survey and settlement of the district. There would, too, be good grounds for the dissatisfaction; for where an increase accrued there would be no certainty that it was properly so charged, and it would be quite possible for a ryot entitled to a decrease to have his assessment enhanced. I hope, therefore, it may be feasible to arrange for so necessary a measure being generally undertaken throughout the district so as to render the survey fully effective. It was always intended that these minor holdings should be separately measured, and the maximum for clubbing in dry was extended to 12 acres in this district on this consideration.

188. In conclusion, I regret the length to which this report, which I contemplated being brief, has extended. This necessity for fully explaining the proposals, and the importance of the many questions referred to, may, I trust, be recognized.

ENCLOSURE No. 2.—Appendix.

THE settlement proposed for North Arcot is based on the usual processes worked out for four of the nine taluks of the district, but the information given is amply sufficient to arrive at conclusions for the whole, and the Board support the request that the rates recommended by the First Member in charge of Settlement, when sanctioned, may be applied throughout the district generally, without any further proposals. A similar arrangement was sanctioned in G.O., No. 1,779, dated 22nd May 1877, for the Tinnevelly District, thus expediting the settlement by perhaps two years and cheapening the cost by about a lakh of rupees. In the present instance, moreover, further proposals are even less needed than they were when the Tinnevelly District was settled, as the Board propose, with the permission of Government, to adopt in this and all future settlements a standard table of rates to the exclusion of such further experiments in the yield of soils, cultivation expenses, &c., as have been repeated for various tracts now upwards of twenty times. It will be advantageous, however, to work out a commutation price for each district as usual, as having this to compare with will render a revision of assessment thirty years hence a mere matter of account, and so obviate the necessity of revisiting the lands of a district; there are but three districts more to settle, and in two of these—South Arcot and Madura—a commutation price has already been worked out for a single taluk by the Settlement Department, so Bellary alone remains, and determining a commutation price for this district and modifying what has been partly worked out for South Arcot and Madura will not involve very much labor.

Chidambaram, in South Arcot.
Melúr, in Madura.

2. North Arcot is stated to export a considerable surplus of grain, and the district is undoubtedly prosperous, the present assessment having been framed to meet the circumstances of the years immediately preceding 1857, when the market was greatly depressed. The highest single-crop rate of assessment now known in the district is but Rs. 7-8-0 an acre, while the soils to which this maximum rate is applied are found to yield a ton and-a-half or about half a garce of paddy per acre. For such soils Rs. 7-8-0 seems to be hardly appropriate as the half garce sells at present for Rs. 100 and is valued by the Settlement Department at Rs. 50 in framing the average rate which it is thought safe to adopt throughout a thirty-years' settlement; this yield is for the first crop only; a second crop on the same land yields usually at least half and often as much as the first crop and pays half assessment additional.

3. The assessment of 1805 was much higher than that now existing, for the dry rates have since been reduced by 12½ and 15 per cent. in 1821 and 1857, respectively, while the wet rates were reduced by 12½ and 30 per cent. in those years. All authorities on the subject agree that the present maximum wet rate may be raised, and were it not for the very considerable increase of individual taxation that would ensue there is no apparent reason why North Arcot should not bear a maximum wet rate of Rs. 12 an acre as Tinnevelly does, seeing that the maximum grain values adopted in either district are almost identical and the commutation rate now proposed for North Arcot is but 5 per cent. less than that sanctioned for Tinnevelly. Mr. Rundall, however, proposes Rs. 8 as a maximum for North Arcot; his scale when applied to the Curnam's areas of wet land maintains the present revenue, but raises it by 12 per cent. when applied to the survey areas.

4. The incidence of Mr. Rundall's scheme for wet and dry land, respectively, raises the single-crop assessment of the former by 17 per cent. and that of the latter by 3 per cent., or by Rs. 73,884 and Rs. 6,859; total Rs. 80,743 in the four taluks reported on; with this added the assessment would be still much below the reduced assessment of the period between 1821 and 1857. Assuming, however, that the rates now proposed are sufficiently high for dry land as they correspond very closely with those introduced in other settled districts, the Board still think that the rates for wet land will admit of being raised, and the mode in which this may be done will be dealt with further on.

5. It seems to be needless to review in detail the processes by which Mr. Rundall's rates are arrived at, as this has already been done by the First Member of the Board now in charge of the Settlement. Suffice it to say that numerous experiments were made in harvesting crops whereby the yield of paddy was found to *average* upwards of a ton per acre or 1,493 lb. of cleaned rice. To convert this grain into money, Mr. Rundall proposes a commutation price of Rs. 95 per garce of 7,360 lb. or 3¾ tons of paddy. Mr. Puckle, for reasons given in paragraph 16 of his letter, would raise this to Rs. 100 and apply it to a slightly increased grain value for paddy; this small change admits of the maximum acreage charge being raised to Rs. 9. The yield of dry grains on 400,000 acres, the approximate area of dry land cultivation in the district, varies from one half to one-seventh of a ton per acre, average say one-third of a ton, and on much of this area a second crop is grown though it is not taken into account in any of the settlement processes; it may, however, be taken as a set-off against the cotton, indigo, and oil-seeds largely grown in the dry lands, and as securing to the people a yield of 746 lb. per acre on the entire dry area.

6. In Proceedings, No. 2,473, dated 28th August 1879, the Board undertook to review Mr. Wilson's proposal to adopt a standard table of rates applicable in whole or in part to the districts that have yet to be settled. This table is given in the enclosure of the Proceedings referred to and again in paragraph 8 of Mr. Puckle's letter submitting this scheme for North Arcot. To illustrate the amount of labor that may be saved by such a table it is sufficient to mention that no less than 6,000 experiments have been made by reaping crops in the Godávari, Tinnevelly, Coimbatore, and North Arcot Districts and in parts of Kurnool and Cuddapah to arrive at the same maximum grain valuation, viz., 2,760 lb. per acre for paddy, while the maxima adopted in Ganjam, Chingleput, Nellore, and South Arcot, and which necessitated another 6,000 experiments, differ from each other by a few pounds only. The maximum expenses allowed for cultivating an acre of rice-land are almost identical in South Arcot, Trichinopoly, Masulipatam, and Ganjam, and differ but little from each other in Cuddapah and Kurnool; while, merging fractions, every rate of assessment that has yet been proposed is embodied in the proposed table, which works out a scale of assessment ranging from Rs. 12 to 4 annas an acre graded by a system of grouping that provides for the highest rate of a lower group being identical with the second rate of the group preceding it and so admits of the number of groups being extended above or below those shown in the table when needed. The difference between the seven fourth-group rates in this table and the seven first-group rates proposed by Mr. Rundall as applicable to the best wet lands of North Arcot is but 8 annas, and the total difference of assessment on the land to which the three rates which differ apply is but Rs. 180, so that virtually years have been spent in arriving at results for which sufficiently close averages had been already attained. In this instance, however, Mr. Rundall had no alternative but to work out his scheme as usual, for the Board's review of the proposed standard table was purposely deferred, pending the receipt of independent data wherewith to test its applicability to a specimen district, and this is now done for North Arcot.

	LB.
Ganjam	1,840
Chingleput	1,932
Nellore	1,955
South Arcot	1,932

	RS.	A.	P.
South Arcot	7	8	0
Trichinopoly	7	8	0
Masulipatam	7	2	9
Ganjam	7	10	3

Seven Fourth-group Rates of Mr. Wilson's Table.			Seven First-group Rates proposed by Mr. Rundall.			Difference.		
RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
8	0	0	8	0	0			
7	0	0	7	0	0		...	
6	0	0	6	0	0		...	
5	0	0	5	4	0		...	
4	8	0	4	8	0		...	
4	0	0	3	12	0		...	
3	8	0	3	0	0		...	
							...	
38	0	0	37	8	0	0	8	0

7. Commencing with the fourth group of Mr. Wilson's table and applying the rates of this and the three following groups to the wet lands of the four taluks reported on gives an assessment of Rs. 33,489 below that proposed by Mr. Rundall; the cause of this divergence is shown by a glance at paragraph 25 of Mr. Puckle's letter, the difference allowed by Mr. Rundall between his groups being but half a rupee instead of one rupee as in Mr. Wilson's table. A difference of half a rupee in each group, or 19 per cent. between the first and last groups, is not sufficient to meet the wide distinction that undoubtedly exists between the best river irrigation and that of the poorest rain-fed tank in the district, and the Board prefer the more liberal scale of Mr. Wilson's table, which allows of a difference of 33 per cent. in the assessment of the same description of land under the best and worst irrigation.

8. As explained above, however, an 8-rupee rate as a maximum is too low for North Arcot, and Mr. Puckle's proposal to commence with a 9-rupee rate (third group of Mr. Wilson's table) or one group higher than Mr. Rundall's scheme, adopting the rates exhibited in the third, fourth, and fifth groups of Mr. Wilson's table, with a sixth group added, seems preferable; this would raise the assessment on Mr. Rundall's classified area by Rs. 33,868.

9. The adoption of Mr. Wilson's table in North Arcot will not affect the existing *system* of settlement as the grain value of the lands, the price at which this grain should be converted into money, and the net value of the crop have all been determined without reference to this table; but if the use of this table is extended to Bellary, South Arcot, and Madura, districts that yet remain to be dealt with, it will be unnecessary to repeat all the processes mentioned above, as the one aim and object of using the table is to save the repetition of labor that seems to be no longer required.

10. The present (single-crop)? assessment of the 96,203 acres of wet land found in the four taluks reported on is Rs. 4,26,852. Mr. Rundall proposes to raise this to Rs. 5,00,986 while the adoption of the alternative scheme would raise it to Rs. 5,39,854, or by 26 per cent. above the present assessment; as a set-off against this there is 11 per cent. of increase by survey to be charged for, and net increase of 15 per cent. on the irrigated area cannot be deemed excessive, seeing that the assessment of the lands in question has been reduced by 42½ per cent. at various periods since the commencement of British rule, while market prices are now far higher than they were when the reductions were made, and the commutation rate on which the assessment is calculated is the average of twenty years ending with 1865, when prices were at a level to which, with the present facilities for communication, they can never again fall.

11. Mr. Puckle mentions in paragraph 30 of his letter that there will be much adjustment of figures on hearing appeals and by transfers from dry to wet and from wet to dry and the usual abatement of one rupee an acre for lift will have to be made at the settlement; this will tend, of course, to somewhat reduce the amount of assessment proposed.

12. As regards second crop, it will be sufficient to charge half additional to the single-crop rate on large tracts of unfailing double-crop land under superior sources of supply, compounding the charge on the area under inferior sources at one-third, one-fourth, or one-fifth, according to circumstances, and this will be undoubtedly favorable to the ryots, as at present the second crop is charged at a uniform rate of half assessment additional; at settlement the rates of compounding will be fixed on blocks and not on individual fields.

13. The officer making the settlement should, in communication with the Collector, allot waste lands for grazing where required by the villagers.

14. The levy of any considerable increase of assessment from individuals may be made by increments of 2 or 4 annas in the rupee, thus granting the ryot eight or four years, according to circumstances, before the full amount of the additional charge is levied from him. In North Arcot there is likely to be a considerable increase of assessment, and the hardship to individuals will be modified if this system is allowed to continue.

15. The well-lands noted in paragraph 12 of Mr. Puckle's letter should be treated as dry.

16. Provision is made for the introduction of a third group for dry lands if needed; it will rest with the officer making the settlement to avail himself of this provision should he meet with any villages exceptionally circumstanced.

17. When the settlement is made the charge for water to dry lands should be the same as that laid down in Board's Standing Order No. 5.

(True Copies and Extract.)

(Signed) C. A. GALTON,
Secretary.

ENCLOSURE.

Proceedings of the Board of Revenue, dated 28th August 1879, No. 2,473.

Read the following letter from C. RUNDALL, Esq., Deputy Director of Revenue Settlement, North Arcot, to W. WILSON, Esq., Director of Revenue Settlement, Madras, dated Chittoor, 21st July 1879, No. 393-160:—

With reference to your endorsement, No. 2,059-339, of the 4th instant, desiring information as to when a settlement scheme for North Arcot may be expected to be submitted to the Central Office, I have the honor to state that, as intimated by No. 1,959-321, dated the 27th ultimo, the survey area lists will not all be furnished for the Chittoor Taluk till the end of October. It will probably take until November to close the final revision of classification of the Wálájpet Taluk, &c., and, therefore, it is unlikely that the scheme can be matured and submitted until early next year.

No. 2,447-47.

SUBMITTED to the Board of Revenue in continuation of this Office No. 2,336-A-44, dated 31st ultimo.

2. Having regard to the slow progress of ordinary and orthodox settlement preliminary operations, Mr. Puckle has suggested that the experience of the department with its twenty-one already sanctioned schemes should now suffice to determine without any preliminary inquiry what should be adopted as the table of money rates to be applied to any new district, the assessment of which is proposed for revision.

Against this it may be urged that—

(1.) The assessment on land being the commutted value of a definite share of its produce it is impossible to determine the assessment without first ascertaining the produce, and this should be done by independent inquiry.

(2.) It would be wrong to apply to a new district without inquiry any table of rates however framed, for the suitability of the table must be ascertained, and this can only be done by inquiry, which again must be directed to either the productive powers of the soil, or a consideration of the range and incidence of present assessments: the former method of inquiry is that hitherto adopted but now objected to on account of the tediousness of its processes: the latter would nearly result in a redistribution of the existing demand.

3. To these objections it may be answered that the districts that have been already settled embrace every variety of climate, soil, and product in the Presidency, and that it may be confidently predicated that any scale to be worked out hereafter by the ordinary methods of the department will fall within the limits of the scales already adopted for other districts. Besides, the rates worked out in the ordinary way for one part of a district have already in several cases been applied without further inquiry to the rest of it; the same method of settlement will be adopted for the southern taluks of Coimbatore, for the Tamil portion of North Arcot, and for three of the taluks of the Sub-division of Cuddapah. If, then, there is no impropriety in applying general knowledge to the settlement of one part of a district on the experience of another, there can be none in the application of general knowledge to the settlement of the four districts for which schemes have yet to be submitted on the experience of the department gained in the greater part of the Presidency. There would be no impropriety therefore in framing on the experience of the department a *standard* scale of rates to be applied without further inquiry to the districts still to be settled.

This standard must be based either on the *average* of all the rates hitherto adopted, or must be an *arbitrary* scale that will embrace and provide for all rates which on the experience of the department can be regarded as probable.

4. The result of settlement operations so far has been the application of thirty-four rates varying from Rs. 12 to Re 1 in "Wet" and of twenty-seven varying from Rs. 20* to As. 4 in "Dry." Excluding Ganjam, where the highest wet rate was exceptionally low Rs. 5-8-0, the highest settlement "Wet" rate is on the average Rs. 9-12-8, say Rs. 10, and excluding the Godávari special rates the highest "Dry" Rs. 4-4-0, say Rs. 4. Assuming that no "Wet" rate should be less than Rs. 2, the average of settlements would give scales ranging from Rs. 10 to 2 in "Wet" and from Rs. 4 to As. 4 in "Dry."

* Special rate for Godávari islands.

Now it is at once obvious that a wet scale having for its highest limit Rs. 10 would not satisfy the requirements of the best lands under the Pálár and Poiney anicuts in North Arcot and the Pelandorai anicut in South Arcot, which are quite as able to bear rates of Rs. 12 and 10-8-0 as the Bhaváni channel lands of Coimbatore and the Támbraparni valley of Tinnevelly. Nor again would a dry scale ranging from Rs. 4 to As. 4 sufficiently meet the case of the best dry lands in those four districts, which are as able to bear a Rs. 5 rate as the best in Nellore, Cuddapah, Salem, Tinnevelly, and the Godávari. Scales framed on the *average* of previous settlements must therefore be rejected because of their insufficiency, and an *arbitrary* scale embracing the most salient feature of all must be adopted; for this purpose the following scales ranging from Rs. 12 to Rs. 2 in wet and from Rs. 5 to As. 4 in dry will, it is believed, embrace and provide for every possible scale that could by the ordinary methods of the department be worked out for any of these districts. The adoption of these standards would reduce settlement operations broadly to classification and introduction, and would probably affect materially the strength of settlement establishment, if not indeed the constitution and continued existence of the department.

OOTACAMUND,
9th August 1879.

(Signed) W. WILSON,
Director of Revenue Settlement.

ENCLOSURE No. 1.

TABLE of Money Rates for Wet Lands.

Wet.

Classification.		Rate per Acre.									
Class.	Sort.	Taram.	1st Group.	Taram.	2nd Group.	Taram.	3rd Group.	Taram.	4th Group.	Taram.	5th Group.
1		2		3		4		5		6	
IV.	1	1	RS. A. 12 0	2	RS. A. 10 8	3	RS. A. 9 0	4	RS. A. 8 0	5	RS. A. 7 0
III. IV. VII.	1 2 1	2	10 8	3	9 0	4	8 0	5	7 0	6	6 0
III. IV. V. VI. VII. VIII. XII.	2 3 1 1 2 1 1	3	9 0	4	8 0	5	7 0	6	6 0	7	5 0
III. IV. V. VI. VII. VIII. XII. XIII.	3 4 2 2 3 2 2 1	4	8 0	5	7 0	6	6 0	7	5 0	8	4 8
III. IV. V. VI. VII. VIII. XII. XIII. XIV.	4 5 3 3 4 3 3 2 1	5	7 0	6	6 0	7	5 0	8	4 8	9	4 0
III. V. VI. VII. VIII. XII. XIII. XIV.	5 4 4 5 4 4 3 2	6	6 0	7	5 0	8	4 8	9	4 0	10	3 8
V. VI. VIII. XII. XIII. XIV.	5 5 5 5 4 3	7	5 0	8	4 8	9	4 0	10	3 8	11	3 0
XIII. XIV.	5 4	8	4 8	9	4 0	10	3 8	11	3 0	12	2 8
XIV.	5	9	4 0	10	3 8	11	3 0	12	2 8	13	2 0

(Signed) W. WILSON,
Director of Revenue Settlement.

9th August 1879.

TABLE of Money Rates for Dry Lands.

Dry.

Classification.		Rate per Acre.					
Class.	Sort.	Taram.	1st Group.	Taram.	2nd Group.	Taram.	3rd Group.
1		2		3		4	
II	1	1	RS. A. 5 0	2	RS. A. 3 8	3	RS. A. 2 8
II ... ... IV	2 1	2	3 8	3	2 8	4	2 0
III ... ... IV ... ... VII	1 2 1	3	2 8	4	2 0	5	1 8
III ... ... IV ... ... V ... ... VI ... ... VII ... ... VIII ... ... XII	2 3 1 1 2 1 1	4	2 0	5	1 8	6	1 0
III ... ... IV ... ... V ... ... VI ... ... VII ... ... VIII ... ... XII ... ... XIII	3 4 2 2 3 2 2 1	5	1 8	6	1 0	7	0 12
III ... ... IV ... ... V ... ... VI ... ... VII ... ... VIII ... ... XII ... ... XIII ... ... XIV	4 5 3 3 4 3 3 2 1	6	1 0	7	0 12	8	0 8
III ... ... V ... ... VI ... ... VII ... ... VIII ... ... XII ... ... XIII ... ... XIV	5 4 4 5 4 4 3 2	7	0 12	8	0 8	9	0 6
V ... ... VI ... ... VIII ... ... XII ... ... XIII ... ... XVI	5 5 5 5 4 3	8	0 8	9	0 6	10	0 4
XIII ... ... XIV	5 4	9	0 6	10	0 4	10	0 4
XIV	5	10	0 4	10	0 4	10	0 4

(Signed) W. WILSON,
Director of Revenue Settlement.

WITH this letter the Director of Revenue Settlement submits a report from Mr. Rundall to the effect that a scheme for the settlement of North Arcot cannot be expected till early next year partly owing to the want of survey areas for some villages of Chittoor and partly owing to the slow progress of the detailed classification of Wálajápet.

2. The comparison of survey and Curnam's areas for every field of every village however is not needed to work out a scheme, and the Board's will be prepared to receive percentage estimates of area for some of the villages framed on the ascertained average of the bulk of the villages for which areas have already been furnished; in the same way the classification can be expedited by leaving some details to be attended to later, and the Board look to the Director to place this scheme with his comments upon it in their hands before the end of the current calendar year. The subject-matter of the Director's memorandum will be dealt with when the North Arcot scheme is before the Board.

(True Copy and Extract)

(Signed) C. A. GALTON,
Acting Secretary.

No. 90.

ORDER THEREON, 6th April 1881, No. 591.

Land Revenue, No. 2.

AFTER a careful consideration of the proposals contained in the paper read above, the Right Honorable the Governor in Council is of opinion that it is not advisable to modify Mr. Rundall's carefully-elaborated scheme in the arbitrary manner proposed by Mr. Puckle and accepted by the Board, which, in fact, abandons the result so laboriously worked out by Mr. Rundall with the result of making a very considerable addition to the enhancement which Mr. Rundall proposes on the existing demand.

2. The argument based on increase by survey is fallacious, for the actual holding is not increased by adopting a different method of measuring it, and the old assumed acreage rate was not the basis for the demand but was deduced from it. The conversion from the old native measurement was inaccurate and statistics deduced from it are unreliable. What the ryot holds and pays for is the same land, however it may be measured.

3. Mr. Rundall's proposals result in 17 per cent. increase in the single-crop assessment of the wet land and 3 per cent. in that of the dry. Mr. Puckle would leave the latter proposals unchanged, but would raise the wet-crop assessment by 26 per cent., which the Government consider excessive. No doubt arguments can be found to justify it in the abstract, but one great object of the revision was to obtain uniformity of principle in all the districts, and should arbitrary rates be adopted in the present instance, this important point would be abandoned.

4. The settlement should be carried out on Mr. Rundall's scheme, and the Government permit its extension to the whole district with the proposed additional dry rate for use when necessary.

5. The second-crop charge should be settled as has been done elsewhere, and not by a uniform rate of one half additional. Composition for a permanent double-crop rate should be encouraged as has been done in other cases.

6. The Government see no reason for ordering a general measurement of interstitial holdings, but desire that the Settling Officer cause this to be done whenever he sees reason to think that the proportional distribution of the survey increase in area is seriously inequitable.

7. The increase of assessment in individual cases will be imposed gradually as usual.

8. The grain values and commutation rates have been worked out on approved principles by Mr. Rundall and should not be arbitrarily altered.

9. The treatment of well lands as dry is a standing principle which on no account should be deemed open to discussion.

10. As to the suggestion for the genera[illegible] f Mr. Wilson's procrustean rule in the three districts remaining to be setta[illegible] the Board nor Mr. Puckle advocate it positively, and the Government consi[illegible] that it should not be allowed. The Board say that in two of the three districts [illegible]e work has been already to a considerable extent *done* on the old system, and that in view of future revision it is desirable to have the whole process worked out and recorded, and what Mr. Puckle says of economy that might have been effected years ago by the other method, ignores the fact that the materials for Mr. Wilson's table of fixed rates for particular classes of soil were not then accumulated.

11. The revision of assessment sho[illegible]hed on the system hitherto adopted, not only for the sake of uniformi[illegible]ple, but also in view to future revision when the basis will be assured on w[illegible] proceed.

(True Extract.)

[illegible] G. MASTER,
[illegible]cretary to Government.

To the Board of Revenue, with one original enclosure returned.
„ the First Member of the Board of Revenue, in charge of the Settlement Department.

31/8/45

Govt. of 1881

REVENUE.

To

THE BOARD OF REVENUE,

&c., &c., &c.

Dated 11th Oct.

Read 31st May

Rec'd Encl.

G.O., 6th April 81, No. 550

APRIL.
Nos. 89-90.

Subject.

Settlement of the North Arcot District – Passing orders on Revenue Board's Proceedings reviewing the scheme for —.

No. 1,495.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 11th October 1880.

Read the following letter from R. K. PUCKLE, Esq., Acting First Member of the Board of Revenue, in charge of the Settlement Department, to C. A. GALTON, Esq., Secretary to the Board of Revenue, dated Madras, 29th July 1880, No. 1,890-30 :—

Mr. Rundall's letter, No. 450-170, dated 14th June 1880, and an Appendix (to be returned).

I HAVE the honor to forward a scheme for the settlement of North Arcot.

2. Mr. Rundall has worked up details for the four taluks of Chandragiri, Chittoor, Gudiyátam and Wálajápet, and considers that if these are accepted the rates proposed may be introduced in the remaining five taluks of Palmanér, Arcot, Vellore, Wandiwash, and Pólúr without any further proposals.

3. Though the scheme now submitted applies to but 593 of the 1,453 ryotwari* villages of the district, yet the taluks dealt with are representative and contain every variety of soil and description of irrigation found in the district, while the commutation rate proposed has been worked up on averages for the entire district, and the cultivation expenses and other deductions apply equally to all the taluks.

* Excluding 65 jungle villages that have not been surveyed.

4. The original pymaish settlement was made in 1805 by Messrs. Græme and Ravenshaw on somewhat different data for the northern and southern taluks respectively, but in 1821 a uniform reduction of 2 annas in the rupee of assessment was made throughout the district, and in 1857 a further reduction approximating to 30 per cent. on wet and 15 per cent. on dry land was made by Mr. Banbury, who merged all the higher rates in a maximum of Rs. 8 an acre for wet and of Rs. 3 an acre for dry land. These maxima rates correspond to those now worked out by Mr. Rundall on entirely different data, but applying these rates to survey areas virtually raises them by 17 per cent. on dry land and 11 per cent. on wet.

5. The four taluks reported on were very imperfectly surveyed in the original pymaish of 1805, and Mr. Rundall finds that in Chandragiri and Chittoor the area in occupation is in dry one-fourth and in wet one-fifth in excess of what it has always been represented to be, but the excess is less in Wálajápet and still less in Gudiyátam. So imperfect is the pymaish however, and so greatly do some individual holdings vary in their actual as compared with their reported area, that Mr. Rundall is unable to adjust them rateably with regard to the area of the survey numbers in which they are situated, but has had to undertake the measurement of the inner holdings of those survey numbers in which a large percentage of error occurs. In the latter part of his report Mr. Rundall alludes to the possible necessity for thus measuring the greater part of the district, but the operation is costly and slow, and the necessity for apportioning increase of area in North Arcot with greater accuracy than in other districts is not very apparent. The system adopted elsewhere is to apportion the increase of area found in a given survey number to the holdings A, B, C comprised in it, nearly as a matter of account, making the total of these letters correspond with the total area of the survey number. In this there is no particular hardship. A man may lose a few cents in one number, but he may gain as much or more in another, and I have never heard a complaint in those districts where this has been done. Adjustment on paper moreover has the advantage of costing nothing, while Mr. Rundall estimates his system to cost about Rs. 3,600 in each taluk, and I doubt whether the settlement budget will be able to bear the charge.

6. The irrigation sources are numerous, and 96,203* acres are under wet cultivation in the four taluks reported on. The irrigation has been divided into four classes or groups, viz:—

* Omitting the area held at special rates under ruined tanks and the well lands proposed to be transferred to dry.

(1) The best river-fed tanks under anicuts;

(2) River channels and ordinary channel-fed tanks and the best rain-fed tanks;

(3) Smaller rain-fed tanks and spring channels;

(4) Small, shallow, and indifferent tanks and drainage sources;

and each of the 2,061 sources has been separately considered. This is a far more laborious process than grouping large tracts of country with general reference to irrigation, soil, situation, and circumstance as has been usual in most districts, but Mr. Rundall has worked out the system adopted by him previously in Nellore, and Ganjam has been settled in this way. Its advantages are fully explained in paragraphs 49 to 55 and 111, 112 of the report; yet when vast areas have to be settled and the figures are freely rounded at every step in the process of arriving at the rates of assessment it seems almost needless to descend below the unit of the village for grouping, the more especially as the five sub-divisions into which each class of soil has been divided allow of the fair classification of lands under inferior irrigation, even should the group in which that irrigation is placed be too high in particular instances. In the system that Mr. Rundall adopts the value of the inferior irrigation is relatively somewhat high, the difference proposed between the best river channel and the worst rain-fed tank in North Arcot being but a grade and-a-half, instead of four full grades as is usual in most of the settlements.

7. In the enclosure of Board's Proceedings, No. 2,473, dated 28th August 1879, Mr. Wilson, the late Director of Revenue Settlement, urges that voluminous schemes, based on prolonged research into the circumstances of the districts remaining to be dealt with, are no longer needed, now that twenty-one such schemes have been submitted in the course of the last twenty-one years, and he thinks that the time has arrived to determine a standard table of rates for application in whole or in part to the districts that have yet to be settled.

8. To frame such a table Mr. Wilson reviews all the rates that have as yet been proposed, and, merging fractional differences, works out a scale between Rs. 12 and Annas 4 an acre graded by a system of grouping that provides for the highest rate of a lower group being identical with the second rate of the group preceding it, and so admits of the number of groups being prolonged to almost any extent. This he applies to a classification that provides for all the soils that could be met with in any or every district, and the Board have undertaken to review the proposal when disposing of this scheme for North Arcot. Mr. Wilson's table is given below:—

Name of Soils.	Classification. Class.	Classification. Sort.	Wet. Rate per Acre. First Group.	Second Group.	Third Group.	Fourth Group.	Fifth Group.	Dry. Rate per Acre. First Group.	Second Group.	Third Group.
1	2		3	4	5	6	7	9	10	11
			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Permanently improved	IV	1	12 0 0	10 8 0	9 0 0	8 0 0	7 0 0	5 0 0	3 8 0	2 8 0
Do.	III	1								
Black loam	IV	2	10 8 0	9 0 0	8 0 0	7 0 0	6 0 0	3 8 0	2 8 0	2 0 0
Do. clay	VII	1								
Do. loam	III	2								
Red loam	IV	2								
Black clay	V	1								
Do. loam	VI	1	9 0 0	8 0 0	7 0 0	6 0 0	5 0 0	2 8 0	2 0 0	1 8 0
Do. sand	VII	1								
Red clay	VIII	1								
Do. loam	XII	1								
Do. sand	III	3								
Arenaceous loam	IV	3								
Black clay	V	2								
Do. loam	VI	2	8 0 0	7 0 0	6 0 0	5 0 0	4 8 0	1 8 0	1 0 0	0 12 0
Do. sand	VII	2								
Red clay	VIII	2								
Do. loam	XII	2								
Do. sand	XIII	2								
Arenaceous loam	III	4								
Do. sand	IV	4								
Black clay	V	3								
Do. loam	VI	3	7 0 0	6 0 0	5 0 0	4 8 0	4 0 0	1 0 0	0 12 0	0 8 0
Do. sand	VII	3								
Red clay	VIII	3								
Do. loam	XII	3								
Do. sand	XIII	3								
Arenaceous loam	XIV	3								
Do. sand	III	5								
Black clay	IV	4								
Do. loam	V	4								
Do. sand	VI	4								
Red clay	VII	4								
Do. loam	VIII	4								
Do. sand	XII	4								
Arenaceous loam	XIII	4								
Do. sand	XIV	4								
Black sand	V	5								
Red clay	VII	5								
Do. sand	VIII	5	5 0 0	4 8 0	4 0 0	3 8 0	3 0 0	0 12 0	0 8 0	0 6 6
Arenaceous loam	XII	5								
Do. sand	XIII	5								
Do. heavy sand	XIV	5								
Arenaceous sand	XIII	4	4 8 0	4 0 0	3 8 0	3 0 0	2 8 0	0 8 0	0 6 0	0 4 0
Do. heavy sand	XIV	4	4 0 0	3 8 0	3 0 0	2 8 0	2 0 0	0 6 0	0 4 0	0 4 0

9. With such a table it would not be requisite to apply the highest rates in all districts, but omitting in one, say the Rs. 12 rate and in another perhaps the Rs. 12 and the Rs. 10-8-0 rates to commence with the maximum found to be best suited to local requirements and to assess all the lands of a district in this and the inferior rates, foregoing the initiatory processes of experiments in yield, grain valuation of soils, determination of commutation prices, &c., by which such rates have been hitherto arrived at, Mr. Wilson proposed, in fact, to adopt a formula to save labor of calculation, but as this formula has not yet been sanctioned, Mr. Rundall has worked out his figures without it, and, in paragraph 180 of his report, *objects to* the use of Mr. Wilson's table on the ground that with it the settlement of a district would degenerate into a mere revision of rates of assessment. When, however, speaking of nice distinctions in prices, &c., he may have overlooked the fact that this table was intended for general application to the exclusion of a *quasi*-scientific mode of treatment, for which this country may be hardly prepared, and which is practically largely departed from at each step towards arriving at settlement rates.

10. What Mr. Rundall has done is well done, though the operation has occupied time, which, by Mr. Wilson's plan, would have been saved, and every year so saved would cheapen the process by about half a lakh of rupees. As explained above, however, Mr. Wilson's plan has not yet been sanctioned, and seeing that there are but three more districts to settle, it is not very material whether it is sanctioned or not. It is, however, in my opinion a very practical plan, and its adoption would have saved a large outlay had it been in use years ago.

Madura, South Arcot, and Bellary.

11. In working out therefore an alternative scheme for the irrigated lands of North Arcot, I endeavour to show further on the facility with which Mr. Wilson's table may be applied even to figures arrived at on entirely different data.

12. The soils of the four taluks reported on are in the proportion of one of black to three of red, the red sand tract comprising just about half the area. The fields have been classed in detail and checked by being thrown into blocks in the manner now always adopted. The small area under Government wells is said to be very good, the water being near the surface, the wells themselves being actually springs; this is classed in the exceptional rates for dry land, viz., Rs. 3-8-0, 3-0-0, and 2-8-0 an acre, but the bulk of the wells in these taluks are private property, and the land under them is assessed at the ordinary dry rates without any charge for the wells.

13. Mr. Rundall has taken *rice* (paddy), suzza (cumbu), ragi and ariga (varagu) as the staple crops. Cholum is only cultivated on 4 per cent. of the area while rice is grown on 160,000 acres, of which one-third is cultivated with a second crop, while the other three staples occupy 59 per cent. of the dry land under tillage; the total cultivated area of the district is about 555,000 acres.

14. The yield of the staple crops are estimated at from 1,200 to 590 Madras measures (2,760 to 1,357 lb.) per acre for rice (paddy), from 360 to 115 Madras measures (979 to 313 lb.) for suzza, from 390 to 120 Madras measures (1,100 to 338 lb.) for ragi, and from 480 to 140 Madras measures (1,296 to 378 lb.) for ariga. This estimate as compared with other districts gives the same maximum wet yield of rice as Godávari, Tinnevelly, Coimbatore, and part of Cuddapah, but varies for the dry grains, being less than Salem in suzza and ragi and less than Trichinopoly and Chingleput in ariga. On the whole the grain values are moderate, the actual *average* of 1,756 experiments being 1,159 Madras measures or 2,666 lb. per acre for unhusked rice, while the

The weights here given are those adopted by the Board of Revenue in their Standing Order, No. 290, viz., 2·30 lb. per Madras measure for paddy, 2·72 lb. for cumbu, 2·82 lb. for ragi, 2·70 lb. for ariga; these slightly differ from those adopted by Mr. Rundall.

1½ tons.

result of 214 experiments in the very best soil gives an actual average of 1,479 Madras measures, or 3,402 lb. per acre.

Taram.	Grain Values.	
	Proposed by Mr. Rundall.	Raised by 50 Measures.
	M. M.	M. M.
1	1,200	1,250
2	1,100	1,150
3	1,000	1,050
4	865	915
5	775	825
6	680	730
7	590	640

15. In the dry grains the maxima values are almost identical with the best of the 262 experiments made, and may be freely accepted; for rice, however, 50 measures might be added to the figures worked out by Mr. Rundall, as the yield of the best soil is shown to exceed even 1,250 measures per acre. Taking therefore 1,250 as a maximum, the grain values that might be worked out are shown in juxtaposition with those that Mr. Rundall proposes.

16. To convert the yield into money, Mr. Rundall has taken the average prices of 20 years from 1845 to 1864; as ordered by Government, he found, however, the returns for the decade from 1845 to 1854 to be somewhat unreliable for his purpose. The figures worked out are Rs. 95 per garce of 7,360 lb. for paddy and an average of Rs. 105, and a fraction for dry grains. The former figure is lower than that proposed for any district recently settled, being Rs. 5 below that for Salem, Rs. 10 below that for Chingleput, Rs. 12 below that for Nellore, and Rs. 31 below that for Cuddapah. It is true that North Arcot produces more grain than can be consumed in the district, but it has peculiar facilities of Railway communication by both the North-West and South-West Lines, and its produce should not, I think, be valued lower than that of the adjoining district of Salem, which is tapped by the South-West Line and the Bangalore Branch in a very similar manner. Mr. Rundall has allowed a deduction of 5 per cent. for the ryots' selling months, but in a district like North Arcot, with varying climates and elevations and with so many different descriptions of irrigation, the selling months are really almost all the months of the year, the more especially as 50,000 acres are cultivated with a second crop. This deduction may therefore be foregone, and Rs. 100 per garce may be fixed as the commutation rate for paddy.

Districts.	Commutation price per Garce of 3,200 Madras Measures or 7,360 lb.
	Rs.
Salem	100
Chingleput	105
Nellore	107
Cuddapah	126

17. The average for dry grains is a trifle above that for Salem, but less than that for Cuddapah and Chingleput. This may be accepted unchanged, and I do not propose any alteration in Mr. Rundall's scheme for the treatment of dry lands, which are dealt with by him in the manner usual in all the settlements yet made.

18. Mr. Rundall in paragraph 116 of his report mentions that "The lowest of the dry rates are rarely met with and must apply to a very limited extent. In many villages the rates do not descend below one rupee a cawny, or 12 annas an acre. The lowest dry rate now proposed is 6 annas an acre, and the incidence of the proposals as regards the lower rates shows that, notwithstanding the heavy excess in area determined by survey, the contemplated revision will lighten the assessment of the poorer soils and prove beneficial especially in respect to the large unoccupied waste area existing in most of the taluks." It may, however, be advantageous to provide a third group for those villages of the southern taluks in which a four-anna rate for poor gravelly uplands may possibly be required. This will not, however, in any way affect the figures of the taluks reported on.

Taram.	Cultivation Expenses per Acre.	
	Proposed by Mr. Rundall.	Raised by 5 per cent.
	Rs. A. P.	Rs. A. P.
1	12 3 0	12 12 9
2	11 15 6	12 9 1
3	11 5 5	11 14 6
4	9 15 11	10 7 11
5	9 5 0	9 12 5
6	8 8 0	8 14 10
7	8 0 0	8 6 5

Districts.	Cultivation Expenses per Acre.	
	Maximum.	Minimum.
	Rs. A. P.	Rs. A. P.
Chingleput	11 0 0	4 8 0
Salem	10 14 0	3 8 0
Coimbatore	13 2 10	4 12 10
North Arcot	12 12 9	8 6 5

Districts.	Cultivation Expenses per Acre.	
	Maximum.	Minimum.
	Rs. A. P.	Rs. A. P.
Chingleput	5 8 0	3 10 0
Salem...	5 12 0	3 12 0
Coimbatore	3 6 4	2 3 4
North Arcot	4 1 4	2 7 4

19. If the commutation rate for unhusked rice is raised from Rs. 95 to Rs. 100, the expenses of wet cultivation as worked out by Mr. Rundall require modifying by 5 per cent. The maximum fixed is reasonable and does not differ greatly from that worked out for Chingleput, Salem, and Coimbatore. The minimum moreover is high, and on the whole the allowance is liberal.

20. For dry lands the allowance for cultivation expenses is less than in Chingleput or Salem, but rather more than in Coimbatore, and may, I think, be permitted to stand.

21. The money rates that Mr. Rundall arrives at range from Rs. 8 to Rs. 2 an acre for wet and from Rs. 3-8-0 to As. 6 an acre for dry land. Rs. 8 an acre seems somewhat low for the best-irrigated lands for North Arcot, which are shown to be specially good and to be very highly cultivated. A commutation rate of Rs. 100 per garce applied to a yield increased by 50 measures with cultivation expenses raised accordingly gives a net value, of which one half approximates very closely to Mr. Wilson's third group rates :—

Primary Taram.	Outturn in Madras Measure as now assigned.	Value at Rs. 100 per Garce.	Deduct ⅓th for Vicissitudes of Season and Unprofitable Areas measured into Fields.	Remaining Gross Value.	Deduct Cultivation Expenses.	Net Value	Half Net.	Proposed Rates for First Group.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	1,250	39 1 0	7 13 0	31 4 0	12 12 9	18 7 3	9 3 7	9 0 0
2	1,150	35 15 0	7 3 0	28 12 0	12 9 1	16 2 11	8 1 5	8 0 0
3	1,050	32 13 0	6 9 0	26 4 0	11 14 6	14 5 6	7 2 9	7 0 0
4	915	28 9 6	5 11 6	22 14 0	10 7 11	12 6 1	6 3 0	6 0 0
5	825	25 12 6	5 2 6	20 10 0	9 12 5	10 13 7	5 6 9	5 0 0
6	730	22 13 0	4 9 0	18 4 0	8 14 10	9 5 2	4 10 7	4 8 0
7	640	20 0 0	4 0 0	16 0 0	8 6 5	7 9 7	3 12 9	4 0 0

22. In his letter enclosing his proposed standard table of rates, Mr. Wilson mentions that the best lands under the Pálár and Ponny rivers of North Arcot can as well bear the Rs. 12 and Rs. 10-8-0 rates as the Bhaváni channel lands of Coimbatore or the Támbraparni valley of Tinnevelly; but in paragraph 181 of his report, Mr. Rundall contends that the difference in the commutation rates proposed for Coimbatore and North Arcot (Rs. 126 and Rs. 95 per garce) are so considerable that the latter district could not bear the high assessment mentioned above. In Tinnevelly, however, the

commutation rate is almost identical (Rs. 105) with that proposed for North Arcot, and there higher rates of assessment have been freely applied, but, even omitting the Rs. 12 and Rs. 10-8-0 rates, there seems to be no reason why a Rs. 9 rate should not be applied to the best lands of North Arcot.

Class.	Mr. Rundall's First-group Rates.	Mr. Wilson's Fourth-group Rates.	Mr. Wilson's Third-group Rates now proposed as a Maximum.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	8 0 0	8 0 0	9 0 0
2	7 0 0	7 0 0	8 0 0
3	6 0 0	6 0 0	7 0 0
4	5 4 0	5 0 0	6 0 0
5	4 8 0	4 8 0	5 0 0
6	3 12 0	4 0 0	4 8 0
7	3 0 0	3 8 0	4 0 0

23. Mr. Rundall's first-grouprates run as shown in the margin and approximate very closely to the fourth group of Mr. Wilson's table, but the fourth group seems to be a trifle too low to commence with, and I have worked out a settlement made with the third and lower group rates of Mr. Wilson's table.

24. In his second, third, and fourth groups Mr. Rundall introduces intermediate rates peculiar to each group, and so departs from the simplicity of method of Mr. Wilson's table, which commences invariably one rate below the first rate of the previous group and maintains a uniform difference throughout. Mr. Rundall, in fact, does not lower his rates systematically, group by group, as in Mr. Wilson's table, but makes small differences of 8 or 4 annas instead of 1 rupee in the higher and 8 annas in the lower classes of each group. Mr. Rundall's method compresses a number of rates into four groups, with so little difference between them that, though his first group maximum is lower, his last group maximum is higher than in Mr. Wilson's table, while the existing system of grading the rates in North Arcot is said to be precisely that advocated by Mr. Wilson, for at page 95 of his Manual, Mr. Cox mentions that "in fixing the assessment the villages of each taluk were formed into three classes according as their distance from market towns affected the selling price of grain, and the lands in each village were classed under four or more divisions. The third-class land of a first-class village was considered to be equal to the second-class land of a second-class village and to the first-class land of a third-class village. The same rule of progression continued throughout the classes."

25. The following statement exhibits these tables in juxtaposition :—

Class.	Mr. Rundall's Proposed Rates for four Irrigated Groups.				Mr. Wilson's Proposed Rates for four Irrigated Groups.			
	First Group.	Second Group.	Third Group.	Fourth Group.	Third Group.	Fourth Group.	Fifth Group.	Sixth Group.
	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.	Rate.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	8 0 0	7 8 0	7 0 0	6 8 0	9 0 0	8 0 0	7 0 0	6 0 0
2	7 0 0	6 8 0	6 0 0	5 8 0	8 0 0	7 0 0	6 0 0	5 0 0
3	6 0 0	5 8 0	5 0 0	4 8 0	7 0 0	6 0 0	5 0 0	4 8 0
4	5 4 0	4 12 0	4 4 0	3 12 0	6 0 0	5 0 0	4 8 0	4 0 0
5	4 8 0	4 0 0	3 8 0	3 0 0	5 0 0	4 8 0	4 0 0	3 8 0
6	3 12 0	3 4 0	3 0 0	2 8 0	4 8 0	4 0 0	3 8 0	3 0 0
7	3 0 0	2 8 0	2 8 0	2 0 0	4 0 0	3 8 0	3 0 0	2 8 0

26. Mr. Rundall's dry rates differ so little* from those given in Mr. Wilson's table that no alteration is proposed, but the existence of the similarity goes far to prove the advantage of adopting a formula

* 8 Pies in the rupee of assessment when applied to the survey area.

to save years of patient labor. The Rs. 3-8-0 rate applies solely to lands under Government wells, the maximum *bonâ fide* dry rate commencing at Rs. 3. The rates proposed when applied to the survey area result in an increase of revenue of 3 per cent. The increase of area by survey is, however, 17 per cent., so the dry lands benefit largely, though the total increase of revenue on them is Rs. 6,860.

27. Mr. Rundall proposes an increase of Rs. 73,884, or 17 per cent. in the single crop charge on wet lands, but the increase of area by survey is 11 per cent., and a net increase of 6 per cent. in the charge on the wet lands of the district may be thought to be hardly sufficient, and Mr. Rundall, in paragraph 119 of his report, when alluding to Mr. Bourdillon's desire that Rs. 8 might be the highest rate in the revision of 1857, mentions that "it is hardly likely that even Mr. Bourdillon would have regarded a slightly higher rate as undesirable under circumstances so advantageous to the villages and lands benefited by the irrigation" of the Pálár and Ponny channels which have been greatly improved at the cost of the State since 1857. Mr. Cox, too, writes at page 120 of his Manual:—

"The enormous rise in the value of agricultural produce since the revision of 1857 has made the assessments of the district comparatively light, and an enhancement of the demand would probably now have little effect upon the area of land cultivated. Some of the poor soils, which are really not worth the trouble of cultivation, might be relinquished, but the revenue derived from them is insignificant, and the ryots could afford to pay higher assessments, and yet derive large profit from their labor. In the settled estates the amounts paid by the cultivators without difficulty are enormously in excess of those demanded for precisely similar lands in Government taluks."

28. Under these circumstances, I cannot think that the alternative scale (which raises the single crop charge on the wet lands of these four taluks by Rs. 38,868 above the figure that Mr. Rundall proposes, or by a total of Rs. 1,12,758 above the present assessment) is too high, especially if the second crop charge is compounded at one-third, one-fourth, or one-fifth of the single crop rates under all the inferior sources.

29. The following table exhibits the area and assessment under each money rate of Mr. Rundall's and of the alternative scheme compared with the present revenue:—

Omitting the area held at special rates under ruined tanks and the well lands proposed to be transferred to dry.

The reason why similar rates in Column 1 appear bracketed opposite to different rates in Column 4 in some instances is that Mr. Rundall's system of grouping gives the Rs. 6-8-0 rate for instance as the second taram of the second group and the first taram of the fourth group, whereas the alternative scheme gives Rs. 7 as the second taram of the second group and 6 as the first of the fourth group; hence the area under Rs. 6-8-0 in the one case is included in the Rs. 7 rate and in the other in the Rs. 6 rate.

As per Mr. Rundall's Scheme.			As per Alternative Scheme.		Jammabandi Assessment.
Rate.	Area.	Assessment.	Rate.	Assessment.	
RS. A. P.	ACRES.	RS.	RS. A. P.	RS.	RS.
8 0 0	221	1,768	9 0 0	1,989	1,189
7 0 0	1,654	11,578	...	...	9,044
7 8 0	1,853	13,898	...	...	10,504
	3,507	25,476	8 0 0	28,056	19,548
6 0 0	4,509	27,054	...	...	21,739
6 8 0	12,350	80,275	...	...	66,097
7 0 0	257	1,799	...	...	1,266
	17,116	1,09,128	7 0 0	1,19,812	89,102
5 4 0	4,554	23,909	...	...	19,275
5 8 0	18,163	99,897	...	...	88,239
6 0 0	4,927	29,562	...	...	23,378
6 8 0	26	169	...	...	113
	27,670	1,53,537	6 0 0	1,66,020	1,31,005
4 8 0	2,635	11,858	...	...	9,603
4 12 0	13,390	63,603	...	...	57,484
5 0 0	9,386	46,930	...	...	40,005
5 8 0	874	4,807	...	...	3,822
	26,285	1,27,198	5 0 0	1,31,425	1,10,914
3 12 0	903	3,386	...	...	2,742
4 0 0	6,145	24,580	...	...	22,564
4 4 0	7,059	30,001	...	...	26,615
4 8 0	1,411	6,350	...	...	5,226
	15,518	64,317	4 8 0	69,831	57,147
3 0 0	122	366	...	...	349
3 4 0	1,296	4,212	...	...	4,127
3 8 0	1,905	6,668	...	...	5,739
3 12 0	1,177	4,414	...	...	3,827
	4,500	15,660	4 0 0	18,000	14,042
2 8 0	254	635	...	...	872
3 0 0	907	2,721	...	...	2,457
	1,161	3,356	3 8 0	4,064	3,329
2 8 0	191	478	3 0 0	573	454
2 0 0	34	68	2 8 0	84	122
Total ...	96,203	5,00,986	...	5,39,854	4,26,852

30. There will be much adjustment of these figures moreover on hearing appeals and by transfers from dry to wet and from wet to dry, and the usual abatement of one rupee an acre for baling will have to be made at the settlement.

31. As regards second crop, Mr. Rundall, in paragraph 155, apparently bases his figures on the supposition that all existing permanent double crop should be charged at half additional to the single crop rates, but it will be quite sufficient, I think, to

charge a half rate on large tracts of unfailing double crop land under first-class sources of supply, compounding the area under inferior sources at one-third, one-fourth, or one-fifth according to circumstances. This is in conformity with the spirit of G.O., No. 880, dated 14th July 1874, and is the course that has been adopted in the settlement of most other districts.

32. The assessment of these four taluks is Rs. 6,98,550, which Mr. Rundall proposes to raise by a lakh of rupees, or by 15 per cent., which is the exact equivalent of the increase of area by survey. If the alternative scheme for wet lands is adopted, the increase of assessment will be half a lakh more, viz., Rs. 38,868 in first crop and a ratable increase in second crop the result of which will be an increase of about 6 per cent. on Mr. Rundall's proposals. That the district can well bear the charge is obvious when it is mentioned that the Board's returns for the last two years show the average price of paddy in North Arcot to be Rs. 19¼ per garce, which is double the commutation rate proposed.

33. Mr. Rundall points out the unevenness of the present assessment in paragraph 167, and mentions that many villages are still rated excessively, while others are extraordinarily lowly assessed; he thinks that the reduction of 1857 on the lower class of dry soil was inadequate. This, the scheme, now submitted, rectifies, for, though no rate is proposed under 6 annas while the existing rates go down to 2 annas an acre, the area in the lower rates is nominal, while Mr. Rundall has classed 20,604 acres at 8 annas and 1,797 acres at 6 annas an acre, and the application of all his rates from 1 rupee and under tends to reduce the present assessment as shown in paragraph 165.

34. In paragraph 173, Mr. Rundall reports the more ordinary tanks, especially in the Wálajápet Taluk, to be in a very dilapidated condition, and considers the projected improvements of the irrigation on the left bank of the Pálár likely to be a great boon to many villages, now only nominally supplied from the river. This latter scheme is in the hands of the Public Works Department, and it is uncertain when circumstances will admit of its being carried into execution, but the ordinary tanks of the district have recently been made over to the Collector, and their maintenance will be provided for under rules laid down in G.O., No. 281-I, dated 5th May 1880. These rules in fact apply the Dasabandam system, which Mr. Rundall so strongly advocates to all the minor works, with this material difference that, whereas under the Dasabandam system, the remission is permanent, whether repairs are executed or not; in this case the remission will only be made for work done and approved by the Collector.

35. The question as to whether any considerable increase of assessment by settlement shall be levied from individuals by annual increments has been referred for the orders of Government in connection with the scheme for the revision of assessment in the Sub-division Taluks of Cuddapah. On this point Mr. Rundall differs from Mr. Cox, who would discontinue this mode of treatment which is undoubtedly troublesome to the Revenue officers and very uncertain in its incidence, but orders will probably be received before this report reaches the Board.

36. Mr. Rundall has made no proposal for the allotment of grazing ground for the use of the villagers. Such allotment can, however, be made at the settlement in communication with the Collector under the general sanction conveyed in G.O., No. 341, dated 8th March 1876.

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REVENUE SETTLEMENT OFFICE,
Chittoor,
12th August 1880.

(Signed) C. RUNDALL,
Deputy Director of Rev. Sett.

From C. RUNDALL, Esq., Deputy Director of Revenue Settlement, No. III, North Arcot, to R. K. PUCKLE, Esq., Acting First Member, Board of Revenue, in charge of Revenue Settlement Department, Madras, dated Chittoor, 14th June 1880, No. 450-170.

I HAVE the honor to forward proposals for the settlement of the Chandragiri, Chittoor, Gudiyátam and Wálajápet Taluks of the North Arcot District. These form a portion of the main and sub-division of the district, and have been selected as representative taluks, with the view of the rates of assessment framed being extended to the other taluks, viz., Palmanér, Arcot, Vellore, Wandiwash, and Pólúr.

2. By the memorandum printed with G.O., No. 575, of 11th April 1878, it is required that the scheme to be submitted by me for this district should be as brief as possible, and consequently much of the information usually afforded in Settlement Reports must be dispensed with to conform to this requisition, and necessarily the past Revenue history of the district must be excluded, or at all events very briefly referred to; for, in framing proposals to supersede the existing assessments, the past can hardly be altogether ignored in the report.

3. The omission of the Revenue history of the district in detail is, however, comparatively of little consequence, as it has been lately written for the District Manual by Mr. A. F. Cox, the Head Assistant Collector, and is now passing through the Press; and, with the view that it may be available as thus compiled, I have, with Mr. Cox's permission, requested that a few copies may be separately struck off and attached to this report for ready reference. If this history is consulted, it will be seen that, as originally constituted, on the cession of the Carnatic, the North Arcot District comprised the present five taluks, to the north of the Pálár river, and also the Krishnagiri Division of the Baramahal portion of Salem, and the Venkatagiri and Sydapur Zemindaris of the Nellore District. In 1808 these latter were transferred to the Salem and Nellore Collectorates, and the North Arcot District was reconstructed by the addition from the southern division of Arcot of the present Vellore, Arcot, Wandiwash and Pólúr Taluks, as also the Arni Jaghire. The original survey or pymaish of the district, commenced in 1801-02, was conducted by Mr. Græme for the taluks north of the Pálár, and subsequently by Mr. Ravenshaw for those south of the Pálár; the latter being settled in the first instance along with the existing taluks of the South Arcot District to which they then appertained. It thus follows that the former survey or pymaish of the taluks north and south of the Pálár varied in several important features. The basis of the settlement in both districts was an equal division of the crop after making certain deductions. In South Arcot the Mera or Sotantrums due under the old Hindu system to the village Merahsidars were almost wholly resumed for nunjah or wet lands by Mr. Ravenshaw, and similarly about half for punjah or dry lands, whilst Mr. Græme, in his settlement of the taluks north of the Pálár, included the Mera in the ryot's share.* The estimated produce and rate of commuting the same into money varied considerably as will be hereafter shown; but in either Collectorates varying rates of commutation were adjusted to different localities.

* *Vide* Mr. Cox's Manual.

Paragraph 80.

4. The chief variation of these assessments was in dealing with the charge for double or at second crop in wet lands. Whilst Mr. Græme assessed part of the land of the northern taluks at a consolidated double crop assessment, and part at single crop rates; in Mr. Ravenshaw's assessment for South Arcot the gross produce was considered, whether from one or two crops, and the Government share thereof converted into a money assessment, which has been regarded ever since to include any charge for second crop, the ryot being "at liberty to cultivate what number and description of crops he chose" in wet assessed land without further charge. As now adjusted in the taluks north of the Pálár, the prevailing double crop rates of assessment are 50 per cent., or one half in excess of the single crop charge. It is thus practicable to determine the actual incidence of the charge for either the first or the second crop; and when the supply of irrigation may fail for the second crop, one-third of the consolidated double crop assessment is remitted. For the taluks south of the Pálár it is impracticable to similarly eliminate the actual incidence for the first or single crop assessment, and no claim for any remission is allowed unless the supply may have failed altogether to suffice for the irrigation of the land, and it may have been waste from this cause for the whole year.

South Arcot Manual, page 277.

5. The district passed through the several phases of triennial and decennial leases.—Faslis 1218 to 1220 and 1221 to 1230 respectively. On the termination of the latter leases, a ryotwari settlement was again introduced, and the assessments proving excessive and detrimental to the prosperity of the district, a uniform reduction was sanctioned and put in force in Fasli 1232 at 12½ per cent., or 2 annas on every rupee of assessment. But even this had not the desired effect of extending cultivation and improving the condition of the people; and, after various proposals, and an attempt to resurvey the district, which was abandoned after being undertaken throughout several hundred villages, the mode in which conducted being disapproved, the whole question was reported on by Mr. Bourdillon, and definite proposals for a general revision

of the prevailing rates of assessment were submitted to the Board of Revenue on the 23rd October 1854. Mr. Bourdillon recommended that Rs. 10 should be taken as the highest wet rate per cawny for single crop, and that 30 per cent. reduction should be made in wet and 15 per cent. in dry assessment throughout the district. These proposals were accepted and sanctioned by Government, and in 1855 Mr. George Banbury was appointed as an Additional Sub-Collector to give effect to the reductions.

6. A table of wet rates starting from Rs. 10 per cawny, and descending by As. 8 to Rs. 6, and then by As. 4 to Rs. 2, was framed for the northern taluks; and the formerly prevailing rates were merged therein according to a published table, so as to provide the alleviation deemed requisite in each case. The highest former wet rate for single crop appears to have been Rs. 19-14-6 per cawny; this and all other rates in excess of Rs. 18 were merged under the new rate of Rs. 10. Similarly rates between Rs. 16-8-0 and Rs. 18 were merged with Rs. 9-8-0, and between Rs. 15 and 16-8-0 under Rs. 9. These rates refer to the Chittoor Taluk, and the tables, so far as the merging of the old rates were concerned, varied slightly in different localities. For the lower rates the scale of reduction was much more moderate and rarely exceeded 8 annas.

7. In the southern taluks Mr. Banbury found it impossible to separately rate double and single crop irrigation, and the single charge for either one or two crops as existing since the pymaish had to be perpetuated. Rs. 15 per cawny was fixed as the highest rate including the charge for second crop, the rates descending by Rs. —— to Rs. 10, and then according to the table of the northern taluks. I give below a few examples of the reduction thus effected:—

Taram.	From.	To.	Rate.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	35 0 0	28 2 8	15 0 0
4	22 3 8	19 4 5	12 0 0
7	15 5 0	13 0 9	9 8 0
16	6 13 5	6 8 7	5 8 0
26	3 9 3	3 4 6	3 0 0

8. The dry lands were treated in the same manner, being arranged for both portions of the district under 37 rates, rising from As. 3 to Rs. 4 as regards purely dry land. There were three higher punja rates applicable only to garden lands irrigated by baling. The rates will be found in detail at paragraph 115.

9. The decrease in the Revenue demand foregone by this extensive revision of the rates of assessment amounted for wet to Rs. 3,42,794, and for dry to Rs. 1,28,868, or altogether Rs. 4,71,662 according to the Manual; but I am unable to reconcile these figures with a return made by Mr. Banbury in 1864 when Acting Collector of the district. In the Jamabandi report for 1863-64 Mr. Banbury remarked, paragraph 22—"I may here say a few words regarding the effect of the revision of assessment. Mr. Reade in his administration report showed the result for South Arcot, and I annex a similar statement for this district.

North Arcot.

	Rs.
Average of ten years from Faslis 1257 to 1266 ...	16,47,044
Fasli 1267 in which reduction of assessment was effected	13,74,418
Fasli 1268	16,16,777
„ 1269	17,32,684
„ 1270	15,73,990
„ 1271	16,05,615
„ 1272	16,80,701
„ 1273	16,81,823

"Rs. 40,000 have added to the land revenue of this district since the revision by the transfer of villages from adjoining zillahs; deducting this it is found that only in one fasli has the revised beriz exceeded the average of the ten years prior to the introduction of the measures for improvement and alleviation" * * * * "However, a series of a diverse season is alleged as the cause for this comparatively less gratifying result of Mr. Bourdillon's labors and well-considered schemes for the benefit of this province in which he took so deep an interest."

10. By the foregoing the revenue of Fasli 1267 was Rs. 2,42,359 below the average of the ten years preceding the revision. The net reduction cannot be gathered from these details. In the Jamabandi Report of 1857-58 a comparison is instituted between the demand, &c., of Fasli 1266, the year before the revision, and 1267, the year in which it was given effect to. From this it would appear that, notwithstanding an increase in occupation of 54,634 acres during Fasli 1267, the assessment of the lands under occupancy was no less than Rs. 5,48,579 below the demand of Fasli 1266 as marginally detailed. As, however, very extensive general remissions had been allowed in the preceding years, amounting to Rs. 3,14,108 for Fasli 1266, and the necessity for such general remission ceased with the revision of assessment given effect in Fasli 1267, the whole of the Rs. 5,48,579 can hardly be regarded as assessment foregone by the revision; for had it not been for the revision of assessment the general remissions allowed during several years would have had to be continued.

Faslis.	Under occupancy.	
	Acres.	Assessment.
		Rs.
1266	484,027	20,74,373
1267	538,663	15,25,794
Total ..	— 54,636	— 5,48,579

11. Mr. Banbury's extract given above seemingly refers to the net revenue of each year, and therefore more accurately represents the reduction actually occasioned by the revision. That the subsequent growth of the land revenue of the district may be apparent particulars are tabulated below for the five years preceding the revision, and for succeeding years, or from Faslis 1262 to 1287 (1852-53 to 1877-78):—

Revenue from 1852-53 to 1877-78, (26 years.)

Years and Faslis.	Demand.		Remissions.	Demand less Remissions—Columns 3 and 4.
	Wet and Dry only.	Including Second Crop and Water-rate.		
1	2	3	4	5
	Rs.	Rs.	Rs.	Rs.
1852-53 ... ... 1262 ...	18,26,118	19,01,319	2,83,622	16,17,697
1853-54 ... ... 1263 ...	15,76,304	16,33,041	4,57,318	11,75,723
1854-55 ... ... 1264 ..	16,63,984	17,37,018	4,21,914	13,15,104
1855-56 ... ... 1265 ...	18,54,580	19,19,643	4,62,002	14,57,641
1856-57 ... ... 1266 ...	20,74,372	21,76,757	4,85,624	16,91,133
Average	17,99,074	18,73,556	4,22,096	14,51,460
1857-58 ... ... 1267 ...	15,25,794	15,89,625	2,93,868	12,95,757
1858-59 ... ... 1268 ...	15,50,143	16,41,743	1,24,401	15,17,342
1859-60 ... ... 1269 ...	16,52,919	17,42,350	1,09,314	16,33,036
1860-61 ... ... 1270 ...	16,13,479	16,67,979	1,92,111	14,75,863
1861-62 ... ... 1271 ...	16,40,124	17,01,087	1,95,429	15,05,658
1862-63 ... ... 1272 ...	16,84,733	17,51,351	1,79,601	15,71,750
1863-64 ... ... 1273 ...	17,17,603	17,82,369	2,07,669	15,74,700
1864-65 ... ... 1274 ...	18,00,504	18,80,890	1,32,921	17,47,969
1865-66 ... ... 1275 ...	18,20,780	19,04,958	2,07,408	16,97,550
1866-67 ... ... 1276 ...	17,62,484	18,62,984	1,33,967	17,29,017
1867-68 ... ... 1277 ...	18,01,944	18,55,066	5,97,711	12,57,355
1868-69 ... ... 1278 ...	18,22,948	18,85,687	4,80,717	14,04,970
1869-70 ... ... 1279 ...	18,59,313	19,28,631	2,87,205	16,41,426
1870-71 ... ... 1280 ...	18,67,222	19,74,808	1,15,751	18,59,057
1871-72 ... ... 1281 ...	18,48,393	19,70,323	1,15,330	18,54,993
1872-73 ... ... 1282 ...	18,02,236	19,78,325	1,29,804	18,48,521
1873-74 ... ... 1283 ...	17,70,138	19,01,590	2,09,286	16,92,304
1874-75 ... ... 1284 ...	17,98,505	20,22,024	1,17,666	19,04,358
1875-76 ... ... 1285 ..	17,92,966	18,92,917	2,69,317	16,23,600
Average	17,43,801	18,38,669	2,15,762	16,22,907
1876-77 ... ... 1286 ...	17,89,473	18,30,159	6,36,226	11,93,933
1877-78 ... ... 1287 ...	17,94,185	18,98,649	2,10,626	16,88,023
Average	17,91,829	18,64,404	4,23,426	14,40,978
Average ... ... 1267 to 1287	17,61,233	18,41,120	2,35,539	16,05,581

12. Column 5 of the statement shows the demand less remissions to have averaged Rs. 14,51,460 during the five years preceding the revision of the rates of assessment; that the reductions then made and ordinary remissions allowed on account of failure of the season placed the revenue of 1857-58 at Rs. 12,95,757; that it rose next year to Rs. 15,17,342, or above the average of the five years preceding the revision; and that ever since except in 1867-68 and 1868-69, seasons of considerable scarcity, the revenue has with various fluctuations been more or less in excess of the average of the five years specified down to 1875-76, the year before the famine. The average for the nineteen years, from 1857-58 to 1875-76, amounts to Rs. 16,22,907, including the two years of scarcity alluded to, or Rs. 1,71,447 above the average of the five years prior to the revision. In 1874-75 the assessment amounted to Rs. 19,04,358. It is thus evident that the diminution in the demand, due to the reduction of the rates of assessment throughout the district, was very soon recouped by the extension of cultivation.

13. *Explanation of Delay in framing and submitting these Proposals.*—A reference to the Memorandum which accompanied the Director's letter to Government, No. 576-7, dated the 18th March 1878, will show that the scheme to be prepared was intended to comprise the Telugu Taluks classified at that time—Chandragiri, Chittoor, and Gudiyátam. On resuming work in the district on my return from furlough in September 1878 I found that it was first necessary to revise the classification of the Chandragiri and Chittoor Taluks to the present standard of five sorts under each class, according to which the classification of Gudiyátam had been conducted. I further deemed it essential, as the scheme to be framed was required to be so arranged as to admit of its extension to the Tamil Taluks of the district, that it should comprise as well one of the anicut irrigated taluks, and proposed to Mr. Wilson, with this view, that classification should be extended to the Wálajápet Taluk, irrigated to a great extent from the Palar and Ponna anicuts. This course was approved by the Director: and inasmuch as the survey areas of the Chittoor Taluk could not be wholly furnished until the end of October 1879, but little delay in submitting the scheme has really been occasioned by extending classification to Wálajápet, and including that taluk, the largest and most important in the district, in the present proposals; for the survey maps and areas were then available as it was one of the first taluks surveyed. The classification of the Chandragiri and Chittoor Taluks was thoroughly revised by the classifiers on the basis of five sorts under each taram or class of soil, and uniformity with Gudiyátam thus secured. The whole of each village was gone over, and this revision has been extensively tested by examination. The Wálajápet Taluk was commenced during December 1878, and by August 1879 the classification had been completed by classifiers. It was not, however, until January that the final examination of the classification, conducted for the most part by Mr. Clerk, had been closed.

G.O., No. 575, of 11th April 1878.

Proceedings, No. 2,638-268, dated 23rd October 1878.

14. Under date the 18th January 1879 I was requested by the Director, Mr. Wilson, under orders from Government, to arrange for the classification of the villages benefited by irrigation from the Palar anicut. A part of the tract was then under operation in Wálajápet, and on the completion of the whole taluk the field party moved across the Palar, and took up and classified the villages of Arcot supplied from the same anicut. The present report is, however, limited to the irrigation in the Wálajápet Taluk, or on the northern bank of the Palar. The tract of villages to the south of the river in the Arcot Taluk will be worked up separately, on the basis of the proposals now made, and furnished shortly as a sequel to this report; and the results of the revision of assessment for the whole of the villages commanded by the Palar irrigation will then be communicated.

15. *Details of Villages.*—The villages of each taluk of the district by the Revenue accounts and by survey are enumerated in the subjoined form according to tenure—Government, Inam and Zemin, &c., including Jaghire or Izara villages :—

Taluks.	Details of Villages.								
	By Revenue Accounts.				By Survey.				Villages excluded from Survey.
	Government.	Inam.	Zemindari, &c.	Total.	Government.	Inam.	Zemindari, &c.	Total.	Government.
Chandragiri	188	44	..	232	53	44	..	97	..
Chittoor	461	21	2	484	135	21	2	158	2
Palmanér	254	6	..	260	31	6	..	37	61
Gudiyátam	264	2	..	266	173	2	..	175	..
Wálajápet	290	14	6	310	232	14	6	252	..
Vellore	191	2	..	193	135	2	..	137	1
Arcot	346	6	2	354	253	2	2	261	..
Pólúr	229	1	..	230	160	1	..	161	1
Wandiwash	420	4	..	424	281	4	..	285	...
Total ..	2,643	100	10	2,753	1,453	100	10	1,563	65

16. The Government villages number 2,952, of which 309 have been excluded from demarcation and survey, leaving 2,643 actually surveyed. These were amalgamated at the demarcation and surveyed under 1,453 villages, and will be so constituted at settlement. Many of the existing Revenue villages are practically hamlets; groups of villages termed payakats having to a greater or less extent the same village officers. In some instances hamlets had been converted into separate villages, many of very insignificant extent and revenue, in comparatively recent years, 1858-59. This re-arrangement of villages was duly sanctioned during the progress of demarcation operations, and will greatly facilitate the Revenue administration of the district subsequent to settlement. At paragraph 65 of his report, No. 127, of 23rd October 1854, already alluded to, Mr. Bourdillon pointed out the necessity of this reform. In most of the payakats or groups of villages the sources of irrigation and grazing rights of the hills and forests are common either to some or to the whole of the villages comprising the payakat, and the communal rights as to pasturage could not be separated at the demarcation.

17. The sixty-five villages as amalgamated and excluded from survey comprise 309 Revenue villages by the existing accounts. The two villages of Chittoor are situated amongst the hills bordering Palmanér, and the villages of the latter form the southern and western portion of that taluk. The tract is very hilly and more or less dense jungle, difficult of access for survey or other purposes, and the villages generally are very insignificant and scattered over a large area. The limited cultivation is, moreover, to some extent liable to change as regards locality. The villages of Vellore and Pólúr are situated on the Javvadi hills, forming the boundary with Salem.

Chittoor	2	
Palmanér	305	
Vellore	1	
Pólúr	1	
Total ..	309	

18. The villages held under tenure other than Inam are particularized below :—

Taluks.	Villages.		
	Zemin.	Jaghire.	Izara.
Chittoor ...	...	...	2
Wálajápet ...	4	...	2
Arcot	...	2	...
Total ...	4	2	4

19. *Demarcation.*—The Chandragiri, Chittoor, Gudiyátam, and Palmanér Taluks were demarcated for survey by the Settlement Department, whilst the remaining five taluks of the district were demarcated by the survey. The demarcation was uniformly conducted in all taluks, stones of the same dimensions being used throughout for marking the boundaries and divisions of villages, and for defining the limits of survey fields. The villages of the Chandragiri Taluk and the northern villages of Chittoor were demarcated by holdings in conformity with G.O., No. 754, of 28th April 1871, each holding, however small, being separately marked.

20. *Survey.*—The survey of the district commenced in 1872-73, was completed during 1879, and by the close of 1879-80 the survey area lists for all villages of the district had been furnished to this department.

21. *Comparison of Survey with Revenue Areas for four Taluks.*—Although the survey areas have been supplied for all taluks a detailed comparison has as yet only been worked out for the four taluks to which this report relates. The total and talukwar results may be observed from the following statement :—

COMPARISON OF REVENUE AND SURVEY AREAS—ACRES.

Taluks.	Dry or Wet.	Government Area. Occupied. Revenue.	Occupied. Survey.	Occupied. Percentage.	Unoccupied. Revenue.	Unoccupied. Survey.	Unoccupied. Percentage.	Inam Area. Revenue.	Inam Area. Survey.	Inam Area. Percentage.	Total Area. Revenue.	Total Area. Survey.	Total Area. Percentage.
Chandragiri ..	Dry ..	12,851	16,374	+ 27	12,921	12,967	.. 6	11,263	12,552	+ 11	148,486	154,097	+ 3
	Wet ..	4,815	6,763	+ 20	1,080	1,150	+ 1	3,983	4,642	+ 14			
		17,666	22,137	+ 25	14,001	14,117	+ 1	15,246	17,094	+ 12			
Chittoor ..	Dry ..	56,176	71,441	+ 27	41,426	41,089	— 1	16,474	18,120	+ 10	207,940	138,382	— 33
	Wet ..	15,852	18,905	+ 19	3,355	2,846	— 15	7,764	8,646	+ 11			
		72,028	90,346	+ 25	44,781	43,935	— 2	24,238	26,766	+ 10			
Gudiyátam ..	Dry ..	66,223	73,000	+ 10	28,800	26,790	— 7	13,166	13,856	+ 5	146,640	144,132	— 2
	Wet ..	18,581	20,008	+ 8	3,404	3,029	— 11	4,340	4,628	+ 4			
		84,804	93,008	+ 10	32,204	29,819	— 7	17,506	18,382	+ 5			
Wálajápet ..	Dry ..	70,469	79,594	+ 13	59,569	58,754	— 1	9,280	9,803	+ 6	87,742	71,165	— 15
	Wet ..	47,956	52,065	+ 9	6,774	5,268	— 9	6,762	7,414	+ 10			
		118,425	131,659	+ 10	65,343	64,022	— 2	16,042	17,217	+ 7			
Total ..	Dry ..	205,719	240,409	+ 17	142,716	139,600	— 2	50,183	54,331	+ 8	590,108	510,776	— 13
	Wet ..	87,204	96,741	+ 11	13,613	12,293	— 10	22,849	25,128	+ 10			
		292,923	337,150	+ 15	156,329	151,893	— 3	73,032	79,459	+ 9			

22. The survey determine for the four taluks a deficiency of 3 per cent. on the ayacut or Revenue area. Each taluk varies considerably — Chandragiri and Gudiyátam exhibit an increase by survey of 6 and 1 per cent. respectively; Chittoor a decrease of 14 per cent., whilst for Wálajápet the Survey and Revenue area almost exactly coincide. As regards the occupied, unoccupied, and Inam area very diverse results are apparent for each of the heads specified and for the taluks likewise. On the whole the area in occupation by survey is 15 per cent. in excess of the revenue area, 17 in dry and 11 in wet, and the unoccupied area is similarly 2 per cent. less, 2 in dry and 10 in wet; whilst the Inam area is 9 per cent. in excess, 8 in dry and 10 in wet. The Poramboke area including lands set apart for public purposes, and jungle waste, hills, &c., indicates a deficiency by survey equivalent to 13 per cent. There is thus more or less increase by survey in the occupied and Inam area of each taluk, and a decrease in the unoccupied and Poramboke area. The variation needs mainly to be attributed to defects in the original pymaish or survey, which have been acknowledged to exist for years. Mr. Bourdillon in his report to the Board, No. 127, dated 23rd October 1854, already referred to, observes at paragraph 34 that the northern taluks particularly were "very imperfectly surveyed in 1805."

23. There can be little doubt that the area of hills and forest tracts were often more or less approximately rendered; and the uniform deficiency on the unoccupied or waste area, and excess on that in occupation, would point to the waste area having been considerably encroached on since the pymaish. The increase is greatest in the Chandragiri and Chittoor Taluks, being no less than 27 per cent. throughout the dry land held on putta in each taluk, and 20 and 19 per cent. respectively for the wet holdings. In Gudiyátam the enhancement on the Revenue area is only 10 and 8 per cent. respectively for dry and wet, and in Wálajápet similarly 13 and 9 per cent.

24. Whilst there is an excess by survey for both wet and dry in respect to each taluk the same disparity that is apparent between the taluks is observable as regards the villages of each taluk when examined. The marginal abstract indicates the number of villages in which either the dry or wet occupied area may exhibit a deficit by survey.

AREA IN OCCUPATION.

Taluks.	Number of Villages with a deficiency of Area by Survey. Dry.	Wet.
Chandragiri	..	1
Chittoor	..	2
Gudiyátam	19	18
Wálajápet	10	20
Total ..	29	41

No. 408-164, dated 22nd July 1879.

25. The discrepancies in area noticeable in respect to villages exist between the different holdings of a village. To demonstrate this, when advocating the measurement of the minor holdings of each survey field, I had the variation on each holding calculated for two villages of the Chittoor Taluk demarcated by holdings and surveyed in the same manner without any of the holdings being clubbed. The increase determined by survey averaged 35 and 28 per cent. on the area occupied as dry and 22 per cent. respectively on the wet land in occupation. The two villages as marginally noted* comprised altogether 1,309 holdings, of which only 3 per cent. or 42 holdings were found to coincide with the survey as to area; whilst 94 per cent. or 966 holdings exhibited an increase, and 23 per cent. or 301 holdings indicated a deficit of area by survey. The percentage of increase ranged in both villages over 300 per cent. in some instances, and the deficiency similarly ruled as much as 75 per cent. and on one holding exceeded that amount. Notwithstanding therefore that the villages averaged so considerable, and an enhancement of area by survey, a deficiency of area existed in respect to one-fourth of the holdings. Some idea can thus be formed of the vast variation in area the survey will occasion.

* No. 27, Patur.
" 28, Gundalapalli.

26. *Population and Agricultural Statistics.*—The agricultural and non-agricultural population, details of houses and of stock are embodied in the following form for each taluk of the district, the particulars being collated from the Census and Quinquennial Returns. Seemingly agriculturists are limited to holders of land or registered ryots and sub-tenants, and the agricultural laborers are included under non-agriculturists; and consequently the proportion of the

population engaged on agriculture appears to be little more than one-fourth of the total population :—

Taluks.	Population.			Houses of all kinds.	Agricultural Stock.			
	Agriculturists.	Non-Agriculturists.	Total.		Tilling Cattle.	Cows.	She Buffaloes.	Sheep
Chandragiri	18,898	45,914	64,812	21,577	19,853	19,971	2,821	15,110
Chittoor	51,183	107,040	158,223	27,361	30,554	32,109	4,944	74,130
Palmanér	18,536	39,536	58,072	11,235	11,854	26,092	4,092	29,049
Gudiyátam	32,499	127,492	159,991	22,349	33,948	21,420	5,137	33,588
Wálajápet	36,197	151,347	187,544	24,784	35,567	21,875	4,701	77,693
Vellore	31,477	107,549	139,026	19,456	23,583	18,351	4,723	25,120
Arcot	33,868	115,998	149,866	19,607	22,364	12,265	5,132	28,625
Pólúr	42,349	66,416	108,765	12,616	23,586	18,472	4,886	31,099
Wandiwash	51,713	98,748	150,461	18,039	36,997	24,795	9,265	56,914
Total ..	316,720	860,040	1,176,760	177,024	238,306	195,350	45,701	371,328

27. Further statistics as to the number of puttas and of ploughs, and the average assessment and extent of each putta holding and area held for each plough on the average for each taluk of the district, are abstracted in the annexed statement :—

Taluks.	Fasli 1285 (1875-76.)				Number of Puttas for Fasli 1285.	Number of Ploughs.	Average Assessment of each Putta holding — Columns 2 and 6.	Average extent of each Putta holding — Columns 5 and 6.	Average Area to each Plough — Columns 5 and 7.
	Assessment.	Occupied Area.							
		Dry.	Wet.	Total.					
1	2	3	4	5	6	7	8	9	10
	Rs.	Acres.	Acres.	Acres.			Rs. A. P.	A. D.	A. D.
Chandragiri ..	62,463	9,795	5,181	14,976	9,009	7,962	6 14 11	1 66	1 88
Chittoor ..	1,84,229	42,227	14,149	56,376	23,854	16,552	7 11 7	2 36	3 40
Palmanér ..	65,697	20,026	4,501	24,527	12,486	5,573	5 4 2	1 96	4 49
Gudiyátam ..	2,24,381	54,085	16,568	70,653	20,116	16,549	11 2 6	3 51	4 [illegible]
Wálajápet ..	3,35,108	52,834	36,326	88,660	22,240	14,898	15 1 1	3 99	5 [illegible]
Vellore ..	1,82,772	40,045	12,255	52,300	16,017	11,791	16 6 7	3 27	4 [illegible]
Arcot ..	3,09,661	42,886	29,016	71,902	26,420	12,326	11 11 6	2 72	5 [illegible]
Pólúr ..	1,94,822	46,959	21,163	68,122	20,575	10,938	9 7 6	3 31	6 [illegible]
Wandiwash ..	3,33,783	58,006	32,746	90,752	29,682	17,984	11 3 11	3 06	5 [illegible]
Total ..	18,92,917	366,363	171,905	538,268	180,399	1,14,603	10 7 11	2 98	4 [illegible]

28. The holdings run very small indeed, just 3 acres, and the average assessment of each putta is barely Rs. 10¼. It needs to be borne in mind that many ryots have interest in more than one putta; but, even if this is allowed for, many holdings of very insignificant extent, less even than the average, must exist throughout the district.

29. *Rent Roll.*—The rent roll of each taluk and the whole district for Fasli 1286 (1876-77) stood as under :—

Rent Roll—Single and Joint Puttas.

Taluks.	Ryots paying Under Rs. 10.												Total of Single and Joint Puttas.
	From 10 To 30				From 30 To 50				Total.				
	From 1 To 60		From 60 To 100		From 1 To 60		From 60 To 100		From 1 To 250		From 250 To 500	From 500 To 1,000	
	Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Joint.	Single.	Single.	
Chandragiri ..	5,101	1,680	17	27	620	1,249	97	102	5,878	3,131	1	1	9,009
Chittoor	13,809	5,580	4	6	2,392	1,662	121	205	16,349	7,505	..	..	23,854
Palmanér	8,634	2,465	..	3	659	544	65	61	9,386	3,100	..	..	12,486
Gudiyátam	10,402	3,595	38	42	3,012	1,834	493	336	14,126	5,990	..	..	20,116
Wálajápet	13,076	5,002	19	32	1,701	1,494	298	368	15,202	7,038	..	1	22,240
Vellore	8,076	3,335	12	11	2,291	1,561	299	250	10,777	5,240	..	..	16,017
Arcot	13,122	4,596	106	128	3,795	1,972	938	739	18,437	7,983	3	1	26,420
Pólúr	11,197	5,427	14	12	1,882	1,328	268	254	13,459	7,116	..	..	20,575
Wandiwash	16,341	7,210	9	19	3,018	1,930	439	396	19,081	9,701	..	..	29,082
Total ..	99,758	38,890	219	280	19,370	13,674	3,018	2,711	123,505	66,804	4	2	180,399

30. *Rain-fall.*—The rain-fall of the ten Revenue years or faslis preceding the famine 1866-67 to 1875-76, is furnished Talukwar in the subjoined statement, and the average of the whole period is also given :—

Taluks.	Average Rain-fall—Inches—1866-67 to 1875-76.										
	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	Average.
Chandragiri ..	25	18	15	30	33	37	31	34	48	24	30
Chittoor ..	28	13	25	30	46	49	45	45	40	23	34
Palmanér ..	26	17	23	21	35	39	37	47	48	15	31
Gudiyátam ..	22	11	24	31	29	43	44	57	50	26	34
Wálajápet ..	45	29	21	25	38	47	50	52	47	30	38
Vellore ..	43	22	28	37	48	50	47	53	45	32	40
Arcot	38	20	21	26	39	50	50	37	37	31	35
Pólúr	37	30	21	27	38	39	48	48	41	32	36
Wandiwash ..	31	25	30	29	35	42	66	55	55	28	40
Average..	33	21	23	28	38	44	46	48	46	27	35

1866-67 to 1875-76.
Average Rain-fall of each month.

January	0·53	September ..	6·27
February	0·64	October	6·85
March	0·40	November	4·42
April	0·29	December	1·82
May	3·25		
June	2·32	Total ..	35·33
July	3·10		
August	5·44		

31. The average rain-fall for each month of the series of years is marginally exhibited. On the whole it is well distributed, a moderate supply being received with the south-west monsoon, nearly two-thirds, and the remainder under the north-east monsoon. The former is the more certain of the two, the latter monsoon occasionally failing to benefit the district either wholly or in part.

32. *Rivers.*—In the taluks now under consideration the chief rivers are the Swarnamukhi, the Palar, and the Ponna or Poiney. The Swarnamukhi rises in the southern portion of the Chandragiri Taluk and flows in a north-easterly direction towards Chandragiri, near which it is joined by its affluent, the Bhimanadi. The latter drains the extensive range of hills forming the boundary with the Cuddapah District, and the river then takes an easterly course till it passes into the Kalahasti Zemindari, and thence through the Nellore District to the sea. The bed of the Swarnamukhi throughout its course through the Chandragiri Taluk is very slightly below the level of the country on either bank, and consequently numerous river channels are easily led from it, and when the stream fails to flow spring channels are excavated in the sandy bed, and irrigation is thus continuously maintained. Numerous spring or kasam channels also exist along either bank of the river and afford a perennial supply. The Palar rises in the Kolar Division of Mysore, and having passed through the Kangundi Zemindari it crosses a projecting arm or corner of the Salem District, enters North Arcot and flows on through this district, dividing the Gudiyátam and Wálajápet Taluks to the north from Vellore and Arcot to the south, and then proceeds through Chingleput to the sea. Two important affluents join it in Gudiyátam—the Goderu and the Kanvanadi or Gudiyátam river. Both drain portions of the Palmanér Taluk, and the latter a part of the Punganúr Zemindari as well. The Ponna river is only so termed below the village from which it receives the appellation. In the eastern portion of the Chittoor Taluk it is known as the Bahanadi, and takes its rise on the Cuddapah frontier in the extreme western portion of Chandragiri, and drains almost the whole of the Chittoor Taluk. It forms the boundary between the Chittoor and Wálajápet Taluks, and also between the latter and Gudiyátam, and then unites with the Palar. The Ponna river has several affluents, and though of moderate size they are very effective for irrigation purposes, as the streams flow for several months after the rains cease. All the rivers and streams are tapped by numerous river channels along their course, and the larger rivers have spring or kasam channels as well on either bank to a greater or less extent.

33. The only other river of importance in the district is the Cheyur. It rises amongst the Javvadi hills between Vellore and the Tirupatur Taluk of Salem, and passes through the Pólúr Taluk, and thence forms the boundary between Arcot and Wandiwash to its junction with the Palar.

34. In the Wálajápet Taluk the Cortalayar takes its rise from the surplus discharge of the Kaveripak tank, and the Tirutani river from that of the Sholingapuram tank. The latter merges with Naggari river, draining the Kárvetnagar Zemindari, and eventually unites with the Cortalayar.

35. The district is fairly intersected by rivers and minor streams, and several of the latter, though of slight breadth, flow during six to eight months of each year, and all may be said to be largely utilized for irrigation.

36. *Irrigation Sources.*—Three of the four taluks under report, Chittoor, Gudiyátam, and Wálajápet, have to a greater or less extent had improved irrigation afforded to some of the villages by the Ponna and Palar anicuts, constructed respectively about 1854-55. The former supplies all three taluks, the latter the Wálajápet Taluk to the north and Arcot to the south of the river. The number of tanks and channels and other sources of irrigation existing in each taluk, both Government, Dasabandam, Chavutayi, and Valavadi, are tabulated in the annexed statement :—

Details of Sources of Irrigation.

Description.	Chandragiri.	Chittoor.	Gudiyátam.	Wálajápet.	Total Number.
Government.					
Tanks	47	227	138	404	816
River Channels	34	137	63	40	274
Spring do.	94	38	143	44	319
Weirs	...	...	...	15	15
Drainages	3	48	8	15	74
Wells	4	...	1	2	7
Total ...	182	450	353	520	1,505
Dasabandam.					
Tanks	78	229	11	1	319
River Channels	13	68	1	...	82
Spring do.	15	22	4	...	41
Wells	...	10	...	...	10
Total ...	106	329	16	1	452
Chavutayi.					
Tanks	11	70	...	3	84
River Channels	...	19	...	...	19
Spring do.	...	1	...	...	1
Total ...	11	90	...	3	104
Valavadi.					
Tanks	3	...	...	...	3
River Channels	5	...	...	...	5
Spring do.	13	...	...	...	13
Total ...	21	...	...	...	21
At special Rates.					
Tanks	4	3	1	...	8
Spring Channels	2	...	...	...	2
Total ...	6	3	1	...	10
Private.					
Tanks	6	3	1	2	12
River Channels	8	...	...	...	8
Spring do.	23	1	...	...	24
Total ...	37	4	1	2	44
Grand Total ...	363	876	371	526	2,136

37. Dasabandam sources are maintained by Dasabandamdars, to whom a grant of land under the source was formerly made as Dasabandam Inam, for the maintenance and repair of the work. Chavutayi Dasabandam sources are similarly held, only the Dasabandamdars receive an assignment of the wet assessment for the same purpose, invariably one-fourth, as the term implies. Valavadi sources supply certain tracts of land granted as wet at a fixed assessment at the time of their construction. They are maintained by the proprietors, who possess the right of charging for any irrigation therefrom extended to other lands. The Valavadi sources do not come under the scope of the settlement, as they are now treated as Inam grants. They are confined to the Chandragiri Taluk. The sources "at special rate" are such as may have been received for some years and may have been made over at Rs. 2-8-0 per acre to the villagers or individuals. The private sources are those recognized as not interfering with Government irrigation, which may have been constructed by private individuals.

38. The sources of irrigation to which these proposals extend aggregate no less than 2,061, as under :—

Details.	Tanks.	Channels.		Weirs.	Drainages.	Wells.	Total.
		River.	Spring.				
Government	816	274	319	15	74	7	1,505
Dasabandam	319	82	41	...	...	10	452
Chavutayi	84	19	1	...	...	..	104
Total ...	1,219	375	361	15	74	17	2,061

39. *Classification of Soils.*—This operation was originally conducted simultaneously with the demarcation throughout the Chandragiri, Chittoor, and Gudiyátam Taluks during the years 1871 to 1876. Whilst the classification of the latter taluk was progressing in 1875, the standard of classification was amended to five sorts under each class of soil, and the classification of the villages of the taluk previously completed was modified accordingly that the whole might be uniform. Before the three taluks detailed could be reported on, it was essential that the classification of the Chittoor and Chandragiri Taluks should be similarly revised to secure uniformity of standard, and of the results of the classification when tabulated for the different taluks. This revision was effected for these two taluks towards the end of 1878 and early part of 1879. At the close of 1878 the Wálajápet Taluk was taken up, and the classification was completed by the classifiers during August 1879. The operation for the whole of the four taluks is now uniform, and each taluk has been either revised or completed in conformity with G.O., No. 221, dated the 15th February 1876, the classification being conducted fieldwar in the first instance and then laid out into blocks. As thus formed into blocks for each village the classification results for the four taluks are furnished in the annexed statement :—

Total Classified Area. Entries Acres and Percentage for each Taluk.

Classification of Soils.			Chandragiri.		Chittoor.		Gudiyátam.		Wálajápet.		Total.	
Main Series.	Class and Sort.											
Exceptional ..	II	1	23	0	230	0	146	0	24	0	423	0
		2	46	0	1,246	1	1,099	1	751	1	3,142	1
		3	51	0	1,199	1	722	0	605	0	2,577	0
	Total ..	..	120	0	2,675	2	1,967	1	1,380	1	6,142	1
Black or Regar.	III, Clay ..	1	..	..	56	0	1,035	1	292	0	1,383	0
		2	..	..	43	0	1,307	1	902	0	2,252	1
		3	..	..	36	0	1,149	1	1,841	1	3,026	1
		4	..	..	..	..	542	0	1,072	0	1,614	0
		5	..	..	..	..	469	0	1,136	1	1,605	0
	Total ..	..	..	..	135	..	4,502	3	5,243	2	9,880	2

Total Classified Area. Entries Acres and Percentage for each Taluk—(*Continued*).

Classification of Soils.			Chandragiri.		Chittoor.		Gudiyátam.		Wálajápet.		Total.	
Main Series.	Class and Sort.											
Black or Regar—(*Contd*)	IV. Loamy ..	1	3,126	6	1,522	1	636	0	835	0	6,169	1
		2	4,140	8	9,339	6	8,243	6	5,448	3	27,170	5
		3	3,688	7	9,820	6	10,275	7	11,899	6	35,682	6
		4	2,037	4	3,834	2	7,542	6	11,971	6	25,384	5
		5	1,432	2	966	1	2,220	2	7,277	3	11,895	2
		..	14,423	27	25,481	16	28,966	21	37,430	18	106,300	19
	V. Sandy ..	1	181	0	484	0	6,294	5	3,227	2	10,186	2
		2	970	2	879	1	2,082	1	5,169	2	9,100	1
		3	1,411	3	402	0	951	1	5,538	3	8,302	1
		4	1,403	2	149	0	17	0	4,218	2	5,787	1
		5	496	1	70	0	204	0	2,621	1	3,391	1
		..	4,461	8	1,984	1	9,548	7	20,773	10	36,766	6
	Total ..	..	18,884	35	27,600	17	43,016	31	63,446	30	152,946	27
Red or Ferruginous.	VII. Loamy ..	1	2,304	4	8,174	5	3,284	2	4,498	2	18,260	3
		2	2,693	5	8,223	5	2,763	2	18,967	9	32,646	6
		3	1,787	3	2,708	2	647	1	25,248	12	30,390	5
		4	293	1	688	1	58	0	14,706	7	15,745	3
		5	444	1	359	0	..	0	5,261	2	6,064	1
		..	7,521	14	20,152	13	6,752	5	68,680	32	103,105	18
	VIII. Sandy ..	1	1,550	3	13,250	8	12,110	9	4,706	2	31,616	6
		2	7,843	15	26,890	16	25,040	17	15,120	7	74,893	13
		3	8,076	15	36,770	23	32,576	23	34,296	16	111,718	19
		4	5,844	11	30,219	19	19,153	14	22,865	11	78,081	14
		5	3,510	7	3,489	2	595	0	2,405	1	9,999	2
		..	26,823	51	110,618	68	89,474	63	79,392	37	306,307	54
	Total ..	..	34,344	65	130,770	81	96,226	68	148,072	69	409,412	72
	Grand Total..	..	53,348	100	161,045	100	141,209	100	212,898	100	568,500	100

40. One per cent. is thus classified under the exceptional series, which will be explained later on; and the black and red soils embrace respectively 27 and 72 per cent. of the total area. The black soils are confined mainly to Class IV, loamy soils, comprising 19 per cent. of the whole; Classes III, clay soils, and V, sandy soils, amounting only to 2 and 6 per cent., respectively. The red soils include 18 per cent. of loam, Class VII, and 54 per cent. of sandy soil, Class VIII. More than half of the classified area falls therefore under the latter class, red sandy soils. Looking at the Talukwar results it will be seen that Chandragiri has the largest proportion of black soil and the smallest of red; the former comprising the rich loamy soils lying along either bank and in the vicinity of the Swarnamukhi. Chittoor possesses the least proportion of black soil and the greatest of red soil. Throughout Gudiyátam and Wálajápet the proportion of each description of soil is much the same, and the percentage of black and red respectively differs but slightly from that for the Chandragiri Taluk.

41. When, however, the extent rated under the different sorts of each class is considered, it is evident that the classification varies greatly. Under Class IV, black loam, the run of the classification is much higher in Chandragiri than in any other taluk, and is lowest in Wálajápet. The area included under the first sort, IV-1, in the former taluk is greater than the area so classified for the other three taluks collectively. Chandragiri, as the classification indicates and will be shown by the experiments of produce, has the advantage of the best soil, Chittoor may be placed next in order, then Gudiyátam, and last of all Wálajápet, in which moderate and indifferent qualities of soil largely preponderate in parts. I refer here to soils of Class IV, which are mainly under irrigation. Under Class V the soils occur chiefly in Gudiyátam and Wálajápet, following the course of the Pálár, and comprise a fair proportion of land of good quality, more especially in Gudiyátam, where there is a large extent of this soil under garden cultivation. Class VII, red loam, exists mainly in Wálajápet, as that taluk contains two-thirds of the whole area. In each taluk a large proportion of this soil is under either wet or well cultivation. In Wálajápet the considerable area is pretty evenly distributed to the different sorts. Class VIII, red sand, includes also red gravel and stony soils. The higher sorts contain a large area of well cultivation in each taluk, more particularly in Chittoor and Gudiyátam. The medium sort, 3, embraces by far the greatest extent in each taluk, and the apportionment of the other sorts may fairly be regarded as moderate.

42. The classification has been conducted with great care, and thoroughly examined in respect to the Chandragiri, Chittoor, and Wálajápet Taluks. Besides the examination undertaken by the Head Classifier, by whom the blocks have been mainly laid out, each village has been further revised by the Supervisor or the Deputy Inspector, and of the 420 villages forming the three taluks, 335 villages have been finally examined either by Mr. Clerk or by myself, as enumerated in the following statement :—

Taluks.	Total Villages Classified.	Villages examined		
		By Deputy Director.	By Assistant Director.	Total.
Chandragiri	53	28	9	37
Chittoor	135	95	...	95
Wálajápet	232	38	165	203
Total ...	420	161	174	335

43. This examination appertains solely to work revised or completed subsequent to the resumption of field work in this district in October 1878. No further villages require examination in Wálajápet, but a few in Chandragiri and Chittoor stand over for further inspection at the time of settlement.

44. The Gudiyátam Taluk was partially examined by Mr. Clerk, the Assistant Director, who mainly conducted the work of that taluk, or had charge of the party whilst it was in progress. The taluk has not been as thoroughly revised as the other three, and several of the villages will need to be inspected at the time of settlement, where the application of the proposals in respect to villages may appear to require further consideration and revision.

45. *Lands rated in the Exceptional Class.*—When Acting Director I authorized the treatment of these lands in an exceptional manner, and remarked, with reference to lands I had inspected in the Gudiyátam Taluk, as follows: "When first seen the lands have the appearance of a fine stretch of regular wet or nunjah land; but on closer examination the wells were found to be the only source of supply for the bulk of the area. The country falls rapidly away from the hills towards the river, and these well lands are situated in comparatively close proximity to the hills. Lower down there is ordinary wet land dependent on small tanks, fed in some measure by spring channels and drainage from these hills. The sandy bed of these drainages is very little below the level of the adjacent fields, and the underflow or percolation below the surface is so considerable that during the rainy season, when the surface may be dry, water is struck by digging a channel of one foot and a half or two feet. The supply thus diverted is led to the well lands on the lower level. These lands formerly—so far as supplied by these channels—were more or less pattada patchal,* and were adjusted seemingly to dry when the latter lands were revised, and water-rate is now charged on irrigation from these temporary channels.

Proceedings, No. 334-33, dated 8th February 1876.

* "Well irrigated."

"The wells are not more extensive than elsewhere, less so generally as they are circular brick wells of small diameter comparatively and no particular depth, whilst the cost is small compared with that of wells in other parts. At the lowest level the water is rarely more than six feet below the surface; and in the rains the supply is so plentiful that the water is almost flush with the surface, and is run off to the fields on the lower level. The whole is more or less very carefully terraced, and the cultivation is double crop, usually paddy for both, or paddy and ragi.

"The advantages which these lands enjoy are thus clearly natural advantages, and the wells differ materially from those in ordinary dry land. It is the facility and certainty of irrigation that gives these lands their high value; and this being a natural element, not occasioned by the outlay incurred for the well, or the capital the occupant may have sunk in the land, it necessarily follows that regard should be had to this attribute in assessing the soil."

46. On these grounds, lands thus circumstanced have been rated in the exceptional series, and the course was concurred in at the time by the Collector, and has been extended to the other taluks under operation. The lands are invariably under paddy each year for one or two crops. The table affording particulars of the classification shows the total area included under this series for the four taluks to be 6,142 acres, of which 423 acres are placed in the first sort, 3,142 in the second, and 2,577 in the third. Of the total area 5,552 acres are at present dry by the revenue accounts, and 590 acres wet, needing adjustment to dry at settlement.

47. *Classing of Villages as regards dry cultivation.*—The villages of the four taluks have been divided into two classes. The first, to comprise villages bordering the Pálár River and the affluents of the latter in the Gudiyátam Taluk with a good depth of soil, and in the vicinity of the Railway—intersecting the taluk—and of the principal market towns; likewise villages of Wálajápet similarly circumstanced and also bordering the Pálár. The second, to include the remaining or more northerly villages of the foregoing taluks skirting the hills, and having less depth of soil or indifferent sub-soil more or less stony. This latter tract in Wálajápet includes the more central villages of the taluk, rather hilly in parts, and the whole of the eastern villages marching with the Chingleput District and Kárvetnagar Zemindari. Also the whole of the villages of Chittoor and Chandragiri Taluks, throughout which the bulk of the soil may be regarded as of similar character, and the villages as on a par as regards markets, both taluks being well provided with roads. It will be seen from the price lists given for each taluk at paragraph 70 that prices rule higher in Chittoor and Chandragiri than in either Gudiyátam or Wálajápet, and therefore what may be regarded as the more distant villages of the former taluks may be considered as somewhat favorably circumstanced owing to their proximity to the Cuddapah District, where higher prices prevail. The first and second-class villages form distinct tracts, and number respectively 207 and 386 villages by survey, as under :—

Classing of Villages for Dry.			
Taluks.	Number of Villages.		
	First Class.	Second Class.	Totai.
Chandragiri ...	...	53	53
Chittoor ...	...	135	135
Gudiyátam ...	137	36	173
Wálajápet ...	70	162	232
Total ...	207	386	593

48. These two classes will, I anticipate, meet circumstance of the remaining taluks of the district. As regards dry soils, the southern taluks are rather better than the northern taluks, and probably a greater proportion of the villages will bear rating in the first class. Palmanér, like Chittoor, will be all second class.

49. *Classing of sources of irrigation.*—For this purpose four classes have been provided for the whole district. The first class to include tanks supplied direct and well fed from the Pálár and Ponna anicut irrigation, or the best and most reliable sources of irrigation of the several taluks, such as the Kávéripák, Mahendravadi, Kodakal Sholankipuram, &c., Tanks. The second class to comprise tanks indirectly fed from the foregoing anicut irrigation, or only after the rivers may have been in flood for some time and the directly-fed or first-class tanks may have filled sufficiently to pass on any surplus supply, also river channels from the Pálár, Ponna, Swarnamukhi, and other rivers affording a perennial supply, and spring or Kasam channels on a par with the latter as regards continuity of the irrigation; likewise river-fed tanks and tanks of fair capacity well fed by the drainage of a considerable extent of country. The third to embrace tanks of moderate size depending solely on local rainfall, the ordinary spring or Kasam channels, and the fair drainage sources. The fourth is to provide for the small, shallow, and indifferently-fed tanks, and the less reliable drainage sources. A few tanks very precariously and only occasionally fed from the anicut irrigation—altogether six—have been incorporated with the third class.

50. Each source has thus been separately classed with reference to its circumstances, the means by which fed, and the degree of capability assignable to the same in respect to the irrigation it may ordinarily afford. Consequently, in villages where there may be several sources—the greatest number in one village is seemingly 33—two or probably three of the classes apply. This procedure differs from the grouping ordinarily pursued in other districts, by which the whole of the irrigation of each village is adjusted under one group by modifying the classification one or two sorts as may be requisite. It conforms, however, with the course followed in Nellore, and recommended originally for Ganjam and seemingly adopted in the settlement of that district.

51. Further, it was arranged by Mr. Wilson, when he visited the district early in 1879 as Director, that, as in Nellore, each source of irrigation should be classed on its merits in this district; for he considered that by this means alone the requirements of the Government of India as to the separation of the land and water assessment would best be met, and the classing of each source separately was undertaken accordingly.

52. By adopting this course the dry assessment applicable to the irrigated land will invariably be the dry rate of the class and sort of soil recorded in the Settlement Register. On the other hand, under irrigation adjusted to one group for each village, the alterations made to the classification by raising or lowering the same one or two sorts, vitiates, to the extent of the modifications made, the appropriateness of the class and sort under which the land may be registered. The entry recorded does not represent the real valuation by settlement of the land as dry; it will be either a higher or a lower value. This is of considerable importance under the Pálár Anicut irrigation and similar projects, where a separation of land and irrigation assessment has to be carried out by deducting from the fixed wet assessment the dry assessment corresponding with the taram at which the land may be registered.

53. Grouping is supposed to simplify the treatment of irrigated land at settlement, but in reality it complicates the same, and this will be realized when the new settlements now in force have to be revised at the conclusion of the period of thirty years. The modifications effected to the classification, to place the whole of the irrigated area of a village appertaining to different sources under one group, will not then be apparent.

54. By adopting the method now advocated, of classing each source separately and giving effect to the same at settlement, it will be practicable, after the expiration of the first term of settlement, to revise the classing of each source on the same basis, with reference to any improvement of supply that may have been made to the work during the currency of the settlement or on other grounds. Each source being kept distinct and so classed, can easily be revised independent of any other source in the same village, should occasion to do so arise.

55. With the numerous sources existing in many villages of this district, the complications that would be occasioned to the classification by attempting to arrange the whole under one group for each village may readily be imagined, and I trust the advantages of classing irrigation sources separately, in place of grouping them, may now be more clearly recognized.

56. Altogether 2,082 separate sources of irrigation have been rated under these several gradations, as indicated by the subjoined abstract giving particulars for each taluk :—

—	Chandragiri.				Chittoor.				Gudiyatam.				Walajapet.				Total.				Total of all.
	Classes				Classes				Classes				Classes				Classes				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Government.																					
Tanks	..	11	29	7	16	72	81	58	12	39	20	..	60	143	120	81	88	265	297	166	816
River channels	..	27	7	..	3	116	18	..	2	60	1	..	7	31	2	..	12	234	28	..	274
Spring do.	..	61	40	3	..	7	31	..	..	98	44	1	6	30	9	..	4	186	124	4	319
Weirs	..	..	2	1	..	..	..	..	..	..	3	..	4	7	1	3	..	7	1	3	15
Drainages	..	..	2	2	..	..	24	24	..	..	..	..	..	4	8	3	..	4	37	33	74
Wells	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	3	4	7
Total ..	..	89	80	13	19	195	154	82	14	197	115	27	76	215	141	88	109	696	490	210	1,505
Danabandam.																					
Tanks	..	7	48	23	..	29	129	71	..	..	7	4	..	..	..	1	..	36	184	99	319
River channels	..	11	2	..	..	24	18	26	..	1	..	..	..	..	..	..	..	36	20	26	82
Spring do.	..	9	6	..	..	6	16	3	..	..	..	..	..	..	..	..	..	16	25	7	41
Wells	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	7	3	10
Total ..	..	27	56	23	..	59	170	100	..	2	10	4	..	1	..	1	..	88	236	128	462
Clavulays.																					
Tanks	..	1	9	1	..	2	35	33	..	..	..	..	..	..	..	..	..	4	44	36	84
River channels	..	..	..	..	..	1	8	10	..	..	..	..	..	..	..	..	..	1	8	10	19
Spring channels	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
Total ..	..	1	9	1	..	3	43	44	..	2	10	4	..	1	..	1	..	5	52	47	104
Valavadi.																					
Tanks	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
River channels	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	6
Spring do.	..	6	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	7	..	13
Total ..	..	10	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10	1	21
Grand Total ..	..	127	155	38	19	257	367	226	14	199	125	31	76	216	141	91	109	799	783	386	2,082

57. At paragraph 38 the sources are shown as 2,061 to which settlement will be extended, and is exclusive of the 21 Valavadi sources included in the above statement, which are not dealt with at settlement, but they require to be classed along with other sources, that the settlement assessment on the lands under them may be recorded in the Settlement Registers in the same manner as for other inams.

58. The first-class irrigation includes 109 sources, viz., 88 tanks, 12 river and 5 spring channels, and 4 weirs. The area under these river and spring channels being commanded and supplied as well from first-class tanks, they are treated as first-class sources. The weirs, or kandams as they are usually termed, are the rough dams across the streams from the Kávéripák and Sholangipuram Tanks.

59. River channels are mainly rated under the second class, as also the larger number of spring channels. It may be said, and rightly said too, that the irrigation from the best of such sources is equal to any irrigation in the district, either anicut-supplied or otherwise. The anicut-supplied tanks involve little or no labor on the ryot for channel clearance; but not so, however, the river and spring channels, which have constantly to be more or less cleared of sand to maintain a continuous flow or supply of irrigation. This customary labor cannot be separately provided for in the settlement, but it has been usual, as in the settlements of Cuddapah, Nellore, and Chingleput, to take the same into consideration in classing such sources, and a like course has been followed in this district. The better river and spring channels for these reasons are rated in the second class, or one grade below the anicut irrigation, and on a par with the larger tanks river-supplied or fed by minor or local streams affording a substantial supply.

60. A few rather indifferent river channels and a good many spring channels are placed in the third class. Save in Wálajápet more tanks are included under the third than the second class. The anicut irrigation in Wálajápet accounts for the difference. Dasabandam and Chavutayi sources are mainly rated as third class also. On the whole, 109 sources are first, 799 second, 788 third, and 386 fourth class. As regards tanks only, 88 fall in the first class, 305 in the second, 528 in the third, and 301 in the fourth class, or more than two-thirds in the two lower classes. Drainage sources comprise the surplus or spent water passed on from irrigation sources, and the supplying streams of tank utilized for direct irrigation.

61. *Standards of commutation Crops.*—As the statistical records of the district merely give the area cultivated under each crop irrespective of the registration of the land as either irrigated or unirrigated, and as several of the principal crops are more or less common to both wet and dry lands, viz., ragi, sazza, and jonna, it is not feasible, in the case of dry lands as in other districts, to elicit the actual percentage cultivated with the chief cereals needing consideration in determining the standard crops to be adopted. The difficulty is of no consequence as regards the wet area, for paddy only, as in other settlements, requires to be taken as the standard wet crop. I have consulted the returns for the three years prior to the famine, Faslis 1283 to 1285, or 1873-74 to 1875-76, as likely to represent the normal cultivation of the district. During this period I find the average dry and wet cultivation is returned as 555,205 acres, as marginally noted. The headings relate to the rating of the land as either dry or wet, so that one-third of the cultivation may be regarded as being wet assessed land. The tabulation of the cultivated area, according to the crops for the same period, shows 601,622 acres on the average to have been under tillage, and as this includes the area of second-crop cultivation the enhancement on the area previously given as that under cultivation is probably accounted for. The distribution of the crops with reference to the 601,622 acres is supplied in the following statement, those generally cultivated as wet and dry respectively being separated under those heads :—

Fasli.	Dry.	Wet.
	ACRES	ACRES.
1283	352,594	184.704
1284	397,250	192,794
1285	366,363	171,905
Average ..	372,070	183,135

Particulars of Dry and Wet Crops Cultivated.

Crops.	Area.	Percentage.	
Wet Crops.			
1. Paddy, first crop	ACRES. 157,935	AS. 67	DS. 98
Do. second crop	58,534	25	19
2. Sugar-cane	2,847	1	23
3. Chillies	2,514	1	08
4. Other products*	10,483	4	52
Total ...	232,333	100	0
Dry Crops.			
Ragi	82,343	22	30
Sazza or Cumbu	81,556	22	08
Aruga or Varagu	55,078	14	91
Horse-gram	27,561	7	46
Cholum	18,722	5	07
Chama	4,441	1	20
Paddy (unirrigated)	5,803	1	57
Oil-seeds	61,219	16	58
Indigo	12,587	3	41
Cotton	209	0	06
Pulses	7,415	2	01
Other food-grains	2,717	0	74
Topes, &c.	9,638	2	61
Total ...	369,289	100	0
Total, Wet and Dry ...	601,622	...	

* Under 1 per cent.—
Tobacco. | Ground-nuts. | Cocoanuts. | Betel, &c.

62. The average area bearing wet assessment is shown above to be 183,135 acres, to which should be added the average extent paying water-rate for irrigation from Government sources. The latter may be taken at 30,000 acres, the water-rate, Rs. 90,838, representing an equivalent of 25,954 acres of paddy, or a greater area should ragi also be included in the calculation. If from the sum of these two items the 232,333 acres reckoned in the last statement as under wet crops *minus* the second crop area, 58,534 acres, is deducted, there remains a deficiency of 39,336 acres under the head of wet crops as under :—

		ACRES.
Wet assessed area under cultivation		183,135
Plus area paying water-rate		30,000
	Total ...	213,135
Deduct—		
Area indicated under wet crops	232,333	
Less second crop	58,534	
		173,799
	Remainder ...	39,336

Some portion of the ragi, and also of the sazza, cholum, and oil-seeds (ground-nut and gingelly) appertain to tank irrigation, and putting the deficiency under the head of wet crops down at 40,000 acres in round numbers, the extent may be considered to comprise the crops and area marginally specified. After effecting this, the area under well irrigation requires to be estimated and separated before the probable extent of the solely dry or rain-fed crops can be even thus approximately arrived at. This is undertaken in the subjoined statement, allowing one-eighth of the total area to be well irrigation :—

	ACRES.
Ragi	20,000
Sazza	6,000
Cholum	4,000
Oil-seeds	10,000

Crops.	Area appertained to			
	Well Irrigation.	Dry Cultivation.	Percentage.	
	ACRES.	ACRES.	A.	D.
Ragi	16,000	46,343	16	19
Sazza or Cumbu	8,000	67,556	23	60
Aruga or Varagu	...	55,078	19	24
Horse-gram	...	27,561	9	63
Cholum	3,000	11,722	4	09
Chama	..	4,441	1	55
Paddy	4,000	1,803	0	63
Oil-seeds	8,000	43,219	15	9
Indigo	2,500	10,087	3	52
Cotton	..	209	0	8
Pulses	...	7,415	2	59
Other food-grains	...	2,717	0	95
Topes, &c.	1,500	8,138	2	84
Total ...	43,000	2,86,289	100	0

63. Whether provision is allowed thus for the area under well irrigation or omitted, it is evident that, as regards the dry lands, sazza, ragi, and aruga are the food-grains principally cultivated in the district, and that, if my calculation is near the mark, they collectively occupy some 59 per cent. of the dry area under tillage. The only other food-grain of importance, cholum, is limited to 4 per cent. and is exceeded considerably by horse-gram sown over nearly 10 per cent of the area. Food-grains and pulses comprise respectively 63 and 12 per cent., or altogether 75 per cent. of the cultivation, the remainder, or one-fourth, being under special products, of which oil-seeds—chiefly gingelly and castor—comprise by far the greater portion, viz., 15 per cent. I propose therefore to select sazza, ragi, and aruga as standard dry crops. They have been taken in the settlements of other districts, and, as may be observed from the following *table*, they are to a greater or less extent cultivated throughout each taluk. Besides the *standard* selected, horse-gram, cholum, and oil-seeds are included in the table, that the *extent* to which they also vary as regards the several taluks may be noticed:—

Taluks.	Area in Acres.					
	Sazza.	Ragi.	Aruga.	Horse-gram.	Cholum.	Oil-seeds.
Chandragiri	2,612	2,746	600	1,459	459	444
Chittoor	10,387	11,052	4,879	7,098	2,559	3,090
Palmanér	400	12,827	264	1,870	263	1,246
Gudiyátam	16,196	8,477	4,547	7,993	3,149	5,422
Wálajápet	10,763	13,288	7,384	1,918	1,373	10,488
Vellore	10,914	7,339	3,097	5,006	5,916	3,562
Arcot	7,988	7,954	9,958	946	1,895	10,379
Pólúr...	16,495	8,259	6,858	856	612	10,538
Wandiwash	5,801	10,401	17,491	415	2,496	16,050
Total ...	81,556	82,343	55,078	27,561	18,722	61,219

64. The first, second, fifth, and sixth crops appertain to wet cultivation as well as to dry. Sazza comprises the largest area under any one crop in Chittoor, Gudiyátam, Vellore, and Pólúr. Ragi occupies a similar position in Palmanér, where it is almost exclusively cultivated, and in Chandragiri and Wálajápet; whilst in Wandiwash and Arcot, respectively, aruga and oil-seeds exceed the area under other crops. Oil-seeds are very extensively cultivated in Wálajápet, Arcot, Pólúr, and Wandiwash. I purpose assigning the cultivation to the representative crops as hereunder explained:—

Crops.	Standards with which merged Area—Acres.		
	Sazza.	Ragi.	Aruga.
Sazza	67,556	...	...
Ragi	...	46,343	...
Aruga	...	...	55,078
Horse-gram	...	...	27,561
Cholum	11,722	...	...
Chama	4,441	...	..
Paddy	...	1,803	...
Oil-seeds	...	43,219	..
Indigo	...	10,087	...
Cotton	...	209	..
Pulses	7,415	...	...
Other food-grains ...	2,717	...	...
Topes, &c.	...	...	8,138
Total ...	93,851	1,01,661	90,777
Percentage ...	32·78	35·51	31·71

65. The more valuable crops are merged with ragi, the medium crops with sazza, and the less productive with aruga. The three standard crops may be fairly considered as representing equal proportions of the dry cultivation, and I propose to so adopt them in determining the money value of the average produce of dry land. In the exceptional class Taram II, sazza and ragi only will be taken.

66. *Commutation Prices.*—These have to be based on the series of twenty years, 1845-46 to 1864-65, prescribed by Government for the uniform determination of the commutation prices for settlement purposes. Unfortunately, in respect to the earlier years of the first decade, the district price lists are very incomplete, having been destroyed with the old records in most taluks. The lists have been fully obtained for only one taluk (Palmanér) and have been found missing in the other eight taluks for some two to six years during Faslis 1255 to 1264 (1845-46 to 1851-52), as marginally particularized. These omissions are so extensive as to prevent the average resulting for the decade being adopted, and recourse has therefore been had to the list of prices relating to this district tabulated in the Revenue Board Office to amend the same. The district list and the Board's list of prices as thus collated are embodied and compared in the following statement. The entries given refer to the average price per Madras garce for each year:—

Taluks.	Years	Taluks.	Years.
Chandragiri ..	.. 6	Vellore ..	.. 5
Chittoor ..	.. 5	Arcot ..	.. 3
Gudiyátam ..	.. 3	Pólúr ..	.. 2
Wálajápet ..	.. 4	Wandiwash	.. 3

3,200 Madras measures equal to 7,200 lb. of paddy.

Faslis.	1845-46 to 1864-65—20 Years.								
	Wet Grain—Paddy.				Dry Grains.				
	Board's List.		District List.		Board's List.		District List.		
	1st Sort.	2nd Sort.	1st Sort.	2nd Sort.	Sazza.	Ragi.	Sazza.	Ragi.	Aruga.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1255	139	128	96	93	198	169	127	133	..
1256	144	131	115	100	186	179	141	136	..
1257	106	96	80	76	128	135	96	103	..
1258	60	54	59	54	78	80	73	78	56
1259	69	63	67	61	85	81	81	78	..
1260	71	64	74	67	81	80	85	81	..
1261	58	52	61	54	71	71	75	71	50
1262	53	48	54	49	69	71	68	66	45
1263	92	87	89	80	135	118	119	109	..
1264	123	114	119	111	147	144	141	131	79
Average ..	92	84	82	74	118	113	101	99	58

1845-46 to 1864-65, 20 Years.

Faslis.	Wet Grain—Paddy.				Dry Grains.				
	Board's List.		District List.		Board's List.		District List.		
	1st Sort.	2nd Sort.	1st Sort.	2nd Sort.	Sazza.	Ragi.	Sazza.	Ragi.	Aruga.
	Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
1265	134	125	128	121	156	161	157	150	103
1266	94	85	93	87	118	123	122	118	66
1267	129	117	121	111	182	164	155	..	..
1268	141	133	145	135	193	192	188	179	120
1269	119	110	118	109	157	157	155	157	94
1270	156	149	152	142	184	190	193	187	113
1271	173	164	171	162	213	211	205	208	104
1272	165	153	164	152	205	196	195	196	180
1273	158	148	155	145	187	175	171	168	159
1274	172	163	167	158	196	184	179	176	201
Average ..	144	135	141	132	179	175	172	170	127
Average 20 Years ..	118	109	112	103	148	144	136	134	105

67. During the three first years of the period there is a vast disparity between the different lists for all grains. For Faslis 1255 and 1256 the entries recorded in the district list refer solely to the Palmanér Taluk, the least important of all the taluks of the district; and for Fasli 1257 to the Wálajápet, Arcot, and Pólúr Taluks as well. With the exception of these three years in the first decade, there is no marked difference between the lists as regards paddy, but the district list exceeds the Board's in Faslis 1260 and 1261. On the other hand, during Fasli 1263 the Board's list exceeds the district list considerably as regards the price of sazza and ragi, and slightly also for the next fasli (1264). During the second decade there is similarly a slight difference between the lists as regards paddy for Faslis 1267 and 1274, and for Fasli 1268 the quotation by the Board's list is below that by the district list. For sazza and ragi also the average price by the Board's list is uniformly in advance of that now compiled as the district list; but in Faslis 1267 and 1270 to 1275 for the former, and Faslis 1265, 1268, and 1274 for the latter, the variation is more or less extensive. The average of the ten years' list referred to indicates the price of paddy, sazza, and ragi to have ruled respectively Rs. 3, 7, and 5 lower by the district list than by the Board's list. It is not possible to account for this. Throughout the first decade, the district lists being more or less imperfect, some variation might be anticipated, but not so during the second decade, the lists being complete for each taluk and each year. The return rendered to the Board may have comprised an average of a greater number of taluks than may now exist for some or the earlier years; but as the reorganization of the taluks had effect from Fasli 1270, and as the same disparity is noticeable between the lists subsequent to that date, the want of accord is not seemingly capable of explanation, and debars either one list or the other from being adopted in its entirety.

68. For the second decade, Fasli 1265 to 1274, the district list being complete should, I consider, be accepted; and for the first decade the price of each grain may reasonably be regarded as relatively bearing the same proportion to the average by the Board's list, as the prices of the several grains, by each list, may bear to one another for the second decade; or, in other words, the average by the Board's list might be reduced proportionately for the first decade to conform with the variation determined for the second decade between the two lists. This adjustment is worked out in the following statement; and the average price according to the district list during the ryots' selling months for each grain is also added, and a similar adjustment effected thereto:—

Years.	Board's List.	District List.			
		Average of each Year.		Average of Ryots' Selling Months.	
		As tabulated.	As adjusted.	As tabulated.	As adjusted.
Paddy, 1st Sort.	Rs.	Rs.	Rs.	Rs.	Rs.
1845-46 to 1854-55	92	82	90	81	90
1855-56 to 1864-65	144	141	141	141	141
Average ..	118	112	115	111	115

Years.	Board's List.	District List.			
		Average of each Year.		Average of Ryots' Selling Months.	
		As tabulated.	As adjusted.	As tabulated.	As adjusted.
Paddy, 2nd Sort.	Rs.	Rs.	Rs.	Rs.	Rs.
1845-46 to 1854-55	84	74	82	75	80
1855-56 to 1864-65	135	132	132	129	129
Average ..	109	103	107	102	104
Paddy Average, 1st and 2nd Sort.					
1845-46 to 1854-55	88	78	86	78	85
1855-56 to 1864-65	139	136	136	135	135
Average ..	113	107	111	106	110
Sazza or Cumbu.					
1845-46 to 1854-55	118	101	113	89	102
1855-56 to 1864-65	179	172	170	155	155
Average ..	148	136	141	122	128
Ragi.					
1845-46 to 1854-55	113	99	110	105	113
1855-56 to 1864-65	175	170	170	175	175
Average ..	144	134	140	140	144
Aruga or Varagu.					
1845-46 to 1854-55	..	58	..	..	..
1855-56 to 1864-65	..	104	..	..	..
Average ..	..	*90	..	..	..

* Expunging unduly high quotations.

69. As thus modified, the district list is only Rs. 2 less than the average of first and second sort paddy, and Rs. 7 and Rs. 4 respectively less for sazza and ragi than the price by Board's list, as regards the average of each year. The Board's list does not furnish the price of aruga, and this grain will need separate explanation. It will further be observed that by the district lists as adjusted the average price of first and second sort paddy during the ryots' selling months is only one rupee short of the average of each year. For sazza the difference is Rs. 13, and for ragi the price prevailing during the ryots' selling months exceeds the average of each year by Rs. 4, which is another anomaly due seemingly to errors in returning the prices. As tabulated, and without any adjustment, the price for ragi during both decades is higher during the ryots' selling months than the average for each year. The months taken as the ryots' selling months for each grain are marginally detailed. If the district returns were more reliable, a much greater difference in this respect would be perceptible. For settlement purposes, however, the average price of the ryots' selling months for the series of years specified needs to be accepted; and, regarding the foregoing not to accurately represent the same, I have had the prices for the succeeding period of ten years (1865-66 to 1874-75) tabulated in like manner, and an abstract is subjoined:—

Paddy, 1st crop	January and February.
Do. 2nd do.	April and May.
Sazza	September and October.
Ragi	January and February.
Aruga	November and December.

District Price Lists, 1865-66 to 1874-75.

Particulars.	Paddy.			Sazza.	Ragi.	Aruga.
	1st Sort.	2nd Sort.	Average.			
Average of each year	158	147	152	189	187	99
Do. of ryots' selling month ...	152	140	146	172	186	...
Difference ...	— 6	— 7	— 6	— 17	— 1	— 99

70. A difference of Rs. 6 is determined in respect of paddy, Rs. 17 in the case of sazza, and one rupee for ragi. The returns for this third decade are more reliable than for the two preceding, greater attention having doubtless been bestowed upon their preparation; and, inasmuch as there is considerable disparity between the prices ruling in the extreme southern taluks of the district—Pólúr and Wandiwash—and throughout the central and northern taluks, it is essential that the variation between the average of each year and of the ryots' selling months should be fully allowed for to render the commutation rates proposed suitable to the district generally. The talukwar average prices of each year for the second and third decades are furnished in the following statement. The price lists of the first decade are too imperfect to form any reliable conclusions from; hence the third decade is given instead:—

AVERAGE TALUKWAR PRICE OF YEARS SPECIFIED.

Taluks.	1855-56 to 1864-65					1865-66 to 1874-75.				
	Paddy.		Sazza.	Ragi.	Aruga.	Paddy.		Sazza.	Ragi.	Aruga.
	1st Sort.	2nd Sort.				1st Sort.	2nd Sort.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Chandragiri	149	141	179	165	..	178	171	218	199	..
2. Chittoor	141	137	185	169	..	149	143	196	175	..
3. Palmanér	152	147	172	173	..	170	158	167	188	90
4. Gudiyátam	145	134	172	162	111	159	149	193	180	76
5. Wálajápet	144	133	168	173	..	165	148	188	197	..
6. Vellore	145	138	178	172	..	166	155	191	184	..
7. Arcot	145	133	179	182	..	155	144	195	197	..
8. Pólúr	125	110	156	167	..	141	127	170	179	98
9. Wandiwash	128	118	139	168	97	144	135	..	188	..
Average of all Taluks ..	141	132	170	170	104	158	148	190	187	88
Average of Taluks Nos. 1 and 3	151	144	175	169	..	174	164	192	193	90
Average of Taluks Nos. 2, 4, 5, 6 and 7	144	135	176	171	111	159	148	193	186	76
Average of Taluks Nos. 8 and 9	126	124	148	167	97	142	131	170	184	98

71. Prices range highest as regards paddy in the Chandragiri and Palmanér Taluks, bordering respectively the Cuddapah District, and Mysore and the Punganúr Zemindari; but as the area under irrigation is comparatively limited in these taluks, it does not signify. On the other hand, in the Polúr and Wandiwash Taluks irrigated from the Cheyár, and bordering the Tiruvannámalai and Tindivanam Taluks of South Arcot, the average of both descriptions of paddy—Rs. 120 and 137—rules some Rs. 16 less for each decade than the district price—Rs. 136 and 153 respectively—determined for all taluks for corresponding periods. Throughout the remaining five or the central taluks of the district the price of paddy is fairly uniform, whilst for dry grains there is, in respect to sazza and ragi, not sufficient disparity to require recognition. The price of sazza in Wandiwash is not reliable during the first period of ten years, as the taluk prices are recorded for this grain only for three years of the decade. Similarly, for the second period one entry alone is recorded—Rs. 298—and, being excessive and likely to prejudice the average, has been excluded.

72. The price lists in respect to aruga need separate attention. The statement for twenty years given at paragraph 66 shows that the prices for aruga during four years of the first and nine of the second decade the only entries available averaged for each decade Rs. 58 and 127 respectively. Aruga is the cheapest of food-grains, being consumed mainly by the agricultural community and by the poorer classes of the population in the localities where grown. It is rarely, if ever, carted for sale elsewhere, and appears in the bazaars to only a moderate extent. It follows, therefore, that in the foregoing and similar statements, giving quotations of the price of grain, aruga should always be the least costly. A glance at the statement in question shows that for the last three faslis of the period aruga exceeded the price of paddy as marginally exhibited, and that for Fasli 1274 the quotation for aruga is higher than for any of the more valuable cereals. The recorded prices as tabulated for the second decade indicates an average price of Rs. 127 for aruga, whilst second-sort paddy only attained an average of Rs. 132 during the same period. I need hardly say this quotation for aruga is unreliable. The corresponding quotations for Chingleput and Nellore, according to the settlement reports of those districts, are, I observe, Rs. 128 and 95 respectively per garce. These prices are the average on the whole of each year. Curiously the same disparity observed above in respect to the price of aruga in this district recurs in Chingleput. The quotation of the latter district for aruga for the ryots' selling months of Fasli 1274 is Rs. 202 and Rs. 176 for the whole year against Rs. 201 in North Arcot for a like period, whilst for Nellore the price is rendered at Rs. 116 for the whole year and Rs. 111 for the ryots' selling months, or almost half of that returned for the other two districts.

Fasli.	Paddy.	Aruga.
	Rs.	Rs.
1272	165	180
1273	158	159
1274	172	201

Statement, paragraph 66.

73. Unfortunately the same unreliability occurs as regards the quotations by the district list for aruga during the succeeding or third decade (1865-66 to 1874-75). According to the recorded prices, the average struck for aruga amounts to Rs. 172 per garce, whilst that for paddy is only Rs. 152. By excluding the entries that exceed the price of paddy, and evidently are inaccurate, and thus omitting altogether the quotations for five* taluks, the average of the returns for the remaining three taluks, that for Chittoor being blank, is only Rs. 99 per garce—a very great difference. In the statement at paragraph 66 the quotations for aruga recorded in the taluk lists are given without any modification at all, whilst in the subsequent statements, paragraphs 68 and 70, the doubtful returns are expunged as above explained. Hence the statements for aruga differ. Moreover, the average calculated by taluks comes to Rs. 88 against Rs. 99 calculated on the average of each year during 1865-66 to 1874-75.

* Chandragiri. Wálajápet. Vellore. | Arcot. Wandiwash.

74. The quotations for aruga thus remarked on may be summarized as under:—

ARUGA.

Particulars.	Prices of		Average	Prices of
	1845-46 to 1854-55.	1855-56 to 1864-65.	1845-46 to 1864-65.	1865-66 to 1874-75.
	Rs.	Rs.	Rs.	Rs.
Average of all returns	58	127	105	172
Average modified by expunging excessive entries	58	104	90	99

As modified, the quotations when compared with the prices determined for the other grains may be accepted as far more reliable than the average of all returns; and if a deduction is allowed for the difference between the prices thus taken as the average of each year and of the ryots' selling month, say of Rs. 7, then the Rs. 90 per garce may, I consider, fairly be accepted as representing what the average quotation should be for the series of twenty years (1845-46 to 1864-65).

75. The district is exceedingly well provided with roads, and as the Railway intersects the district in two directions, grain is largely exported. Mr. Cox in his District Manual calculates the exports of grain to amount to 32,000 tons annually. Most of the large towns, and there are several—Tirupati, Chittoor, Vellore, Gudiyátam, Ambúr, Arcot, Ranipet and Wálajápet—are all large grain marts, so that the district may be said to be amply provided with markets. With such facilities for the sale and export of grain, an uniform deduction of 10 per cent. will suffice to equalize the price as tabulated and now furnished on the basis of the taluk returns with that prevailing in the villages, or the transactions of the bulk of the ryots.

76. The prices thus adopted for each grain, the deductions allowed (1) to equalise the average price of the year to that of the ryots' selling months and (2) to reduce the quotations to those of the ordinary transactions of the ryots, are detailed in the subjoined statement, and the commutation rates resulting from the calculation are worked out, viz., paddy Rs. 95, sazza Rs. 115, ragi Rs. 126, and aruga Rs. 75.

CALCULATION OF COMMUTATION PRICES PER GARCE.

Grain.	By Board's List.	By District List as adjusted.	Deduct difference determined for Ryots' selling months.	Remainder.	Deduct 10 per cent.	Remainder.	Commutation Rate proposed.
	RS.	RS.	RS.	RS.	RS. A. P.	RS. A. P.	RS.
Paddy, 1st sort	118	115	..	..	..	..	..
Do. 2nd do.	109	107	..	..	..	..	..
Average ..	113	111	..	..	..	..	..
Sazza	148	141	6	105	10 8 0	94 8 0	95
Ragi	144	140	13	128	12 12 9	115 3 3	115
Aruga	..	90	..	140	14 0 0	126 0 0	126
			7	83	8 4 10	74 11 2	75

77. The deduction to assimilate the price of paddy to the ryots' selling months (Rs. 6) is the difference indicated by the returns during the ten years 1864-65 to 1874-75. Those for the series of twenty years only show a variation of one rupee as before remarked. The latter exhibits a diminution of Rs. 13 in the price of sazza, and this figure has been accepted as ample for the purpose, though the returns for the succeeding ten years records a decrease of Rs. 19. No difference is apparent in this respect for ragi, and consequently no allowance is made. The sale months taken are for dry ragi; but as there are spring and autumn harvests for this crop when raised under wells and tank irrigation, the price does not seemingly rule lower during the winter months, when dry ragi is disposed of, than at other seasons of the year. For aruga the deduction is, for want of any data, arbitrarily fixed at Rs. 7 (*vide* paragraph 74).

Vide paragraph 69.

78. The commutation prices thus adopted are contrasted in the next statement with those of the neighbouring districts so far as settled.

Districts.	Paddy.	Sazza or Cumbu.	Ragi.	Aruga or Varagu.
	RS.	RS	RS.	RS.
Cuddapah	126	130	...	...
Nellore	107	107	...	64
Chingleput	105	...	142	89
South Arcot (Chidambaram)	72	93	93	52
Salem	100	100	100	100
North Arcot	95	115	126	75

79. For Salem an average price being struck for wet and dry grains, no comparison is possible. The rate proposed for paddy is lower than that sanctioned for any of the neighbouring districts based on the fixed period of twenty years, whilst for the dry grains the proposed rates are lower than the corresponding prices of Cuddapah and Chingleput, but somewhat above those of Nellore as regards sazza and aruga. Seeing that this district largely exports grain by rail, and that the grain exported is principally paddy or rice, it follows that the price of paddy must, when plentiful, rule comparatively low in this district to admit of this extensive export trade being conducted profitably. As will be hereafter explained, the lands under irrigation and yielding paddy are far more productive than the irrigated lands in either Chingleput or Nellore, and consequently a large margin of the produce remains for sale and is exported. For dry grains the prices adopted are moderate. They rule considerably in advance of the price of paddy, and hence are higher than the prices of dry grains in Nellore, where this difference does not exist, but are much below the commutation prices of Cuddapah and Chingleput for the same grains. The Chidambaram taluk of South Arcot was the first tract or portion of a district resettled. The rates then taken do not conform to the series of twenty years we are now guided by.

80. *Former Rates of Commutation, Fasli* 1214 (1804-5).—In Mr. Græme's pymaish the commutation rate varied in different localities of the northern taluks from 112 to 163 measures per pagoda for the produce of land under irrigation. There is some doubt, however, as to the

measure thus quoted. In the District Manual Mr. Cox remarks it is impossible to ascertain the size of the measure, and surmised it to be the Madras measure of 120 tolas. It seems more likely to have been the measure of 150 tolas prevailing in parts of Chittoor and other taluks, and referred to in the table of district measures given in the Board's Standing Orders, pages 614 to 617. If this conclusion is reliable, the former commutation rate for paddy varied from Rs. 51-9-10 to Rs. 80 per garce; or, if the quotation should refer to Madras measures, then the price would be equivalent to Rs. 68 to Rs. 100 per garce. In the southern taluks the commutation rate for both dry and wet grains was fixed seemingly by Mr. Ravenshaw's settlement at the same rate, 5 kallams per pagoda, or Rs. 74-10-8 per garce. The price for the southern taluks being undoubtedly Rs. 74-10-8, the rate fixed by Mr. Græme is most probably that first specified, Rs. 51-9-10 to Rs. 80.

Fasli 1215 (1805-6).

81. *Comparison of proposed Prices with those of later years.*—If there be need to demonstrate the moderation of the commutation rates thus adopted, a comparison with the prices prevailing during 1865-66 to 1874-75, the ten years preceding the famine, will readily effect the same, and particulars are subjoined. The series of years includes one or two years of scarcity of produce —1866-67 :—

Particulars.	AVERAGE PRICE PER GARCE.		
	Paddy.	Sazza.	Ragi.
	RS.	RS.	RS.
Prices of ryots' selling months, 1865-66 to 1874-75	146	172	186
Prices accepted for striking the proposed commutation rate	105	128	140
Difference ...	— 41	— 44	— 46
Percentage ...	39	34	33

The prices accepted therefore may be regarded as ranging from 39 to 33 per cent. below the prices prevailing during the ten years preceding the famine.

82. *Grain Values—Total Experiments.*—Experiments as to the produce of both wet and dry cultivation have been made more or less throughout eight seasons. Particulars as to the years and the number of measurements undertaken are embodied in the following abstract. The kyles or experiments aggregate 1,858 for wet crops (paddy) and 262 for dry crops :—

TOTAL EXPERIMENTS AND YEARS.

Crops.	Revenue Department.	Settlement Department.							Total.
		1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1878-79.	
Paddy	102	420	570	321	173	37	..	235	1,858
Sazza	37	23	60	..	20	..	9	..	149
Ragi	46	7	..	..	..	..	..	..	53
Aruga	10	33	15	..	2	..	..	..	60
Total ..	195	483	645	321	195	37	9	235	2,120

83. The distribution of the measurement according to the taluks in which undertaken is as follows:—

Taluks.	Paddy.	Sazza.	Ragi.	Aruga.
Chandragiri	410	53	7	39
Chittoor	933	58	3	16
Gudiyátam	277	6	1	2
Wálajápet	238	20	6	3
Palmanér	...	12	36	...
Total ...	1,858	149	53	60

84. The experiments as regards wet cultivation (paddy) are fairly numerous, but for dry crops are comparatively few. They were mainly undertaken by this department, the Revenue Department aiding in 1872-73, when 195 kyles were measured by the Tahsildars and Revenue Inspectors.

85. *Wet Experiments.*—The following tabular statement furnishes the measurements for paddy as undertaken by each department with reference to the description and quality of the soil:—

OUTTURN—MADRAS MEASURES PER ACRE—WET PADDY.

Class and Sort.	Settlement Department. Number of Kyles and Average Outturn. Good.	Middling.	Indifferent.	Total.	Revenue Department. Number of Kyles and Average Outturn. Good.	Middling.	Indifferent.	Total.	Total. Number of Kyles.	Average Outturn.
III. 1	1,397	15	4	36	..	..	..	..	36	1,079
2	1,802	4	2	15	1	..	..	1	16	1,015
3	1,244	3	..	14	..	..	..	..	14	1,125
4	998	2	..	4	..	..	..	..	4	818
5	700	..	..	1	..	..	..	..	1	700
IV. 1	1,562	20	6	214	1	..	..	1	219	1,467
2	1,392	89	42	664	24	..	..	24	688	1,223
3	1,184	87	20	366	21	..	..	21	387	1,026
4	1,085	23	6	103	9	..	..	9	112	957
5	846	1	..	6	1	..	..	1	6	848
V. 1	1,123	2	..	10	..	..	..	..	10	1,067
2	1,171	1	..	9	2	..	..	2	11	1,038
VII. 1	1,288	13	3	149	1	..	..	1	163	1,196
2	1,222	33	17	146	6	..	..	6	159	996
3	1,009	14	9	41	..	..	..	..	47	735
4	1,182	3	..	7	..	..	..	..	7	893
5	700	..	..	1	..	..	..	..	1	700
VIII. 1	1,231	9	..	20	..	..	..	..	33	1,063
2	1,182	6	1	36	..	..	..	..	36	1,082
3	958	2	..	6	..	..	..	..	7	834
4	1,275	..	..	1	..	..	..	..	1	1,275
Total ..	..	332	110	1,756	..	..	..	..	1,558	..

Class and Sort.	Revenue Department. Number of Kyles and Average Outturn. Good.	Middling.	Indifferent.	Total.
III. 1	..	..	..	..
2	..	..	..	..
3	..	..	..	..
4	..	..	..	..
5	..	..	..	..
IV. 1	1,280	4	..	5
2	1,090	7	5	24
3	1,066	3	9	21
4	1,223	4	..	9
5	1,022	..	..	1
V. 1	..	..	..	..
2	..	2	..	2
VII. 1	1,344	7	1	14
2	1,149	3	6	14
3	1,031	6	..	6
4	..	..	..	..
5	..	..	..	..
VIII. 1	970	1	..	3
2	..	..	..	..
3	1,120	1	2	2
4	..	..	..	..
Total ..	..	38	20	102

Total. Number of Kyles.	Average Outturn.
17	720
9	..
11	..
2	..
1	..
188	966
433	881
259	769
74	946
4	1,022
8	..
8	603
128	941
95	834
18	642
4	..
1	..
21	922
29	..
3	830
1	..
..	1,314

86. Under both heads the kyles comprised 1,358 good, 370 middling, and 130 indifferent. These proportions may be regarded as singular when compared with other districts; but it is, I am glad to be able to assert, usual throughout the northern taluks of this district for the crops to be very uniform, being invariably well cultivated. The experiments relate to both the first and second crops and the different varieties of paddy cultivated; and, as they are more or less spread over some eight years differing in character, they form a sure and reliable basis for estimating the produce. The yield when contrasted with similar results for other districts indicates the return to be generally much heavier in North Arcot, owing, in a great measure, to the smallness of the holdings and the high state in which the wet farming is conducted. The soil is of all qualities, and in some taluks there is a considerable portion of superior soil. But even where the soils seem poor and the more ordinary and indifferent qualities predominate, as in Wálajápet, the yield is much greater than that obtained either in Chingleput or Nellóre from similar soils. One great advantage that a large portion of the district possesses in common with some other districts is the facility with which leaves can be obtained for manuring wet cultivation. They may be said to be utilized largely by villagers within a moderate distance of the hills and jungles, and are often carted distances ranging up to ten miles.

87. The Chandragiri and Chittoor Taluks and a portion of Gudiyátam likewise have more or less very great facilities for thus securing vegetable manure; and as the cultivators know well from experience the various kinds of leaves suited for the purpose, and annually treat their land to a good dressing for one if not two crops, and apply cattle manure as well, the land is maintained, as a rule, in a high state of fertility, as exemplified by the results of the experiments undertaken and furnished in the last statement. Where the land is cultivated with two crops, it is ordinarily manured with leaves for one crop and cattle manure, &c., for the other. The portion of the Chandragiri Taluk comprising the valley of the Swarnamukhi may be considered most fertile. The soil is good, a loam of fine texture; the irrigation from river or spring channels is certain, and the quality of the water is all that can be desired, and is largely conducive to the heavy yield that is secured. The spring channels in this taluk maintained their supply to some extent even during the famine. Parts of Chittoor Taluk skirting the local streams, and also of Gudiyátam similarly situated, and the valley of the Pálár in the latter taluk and in Wálajápet as well, are all more or less highly fertile. Though the crops generally are thus productive, it can hardly be considered that the various taluks of the district are equally productive throughout. The classification details for the taluks now under consideration, paragraph 39, show the quality of the soil to vary greatly; the higher qualities or sorts preponderate in Chandragiri and the lower in Wálajápet. For the 1,756 measurements of the paddy crop made by the department I find the average yield for the whole series of experiments for each taluk to be as under:—

PADDY—EXPERIMENTS.

Taluks.	Total Number.	Average Yield.	
		Madras Measures.	Lbs.
Chandragiri	391	1,346	3,028
Chittoor	896	1,192	2,682
Gudiyátam	261	999	1,944
Wálajápet	208	864	2,608
Total ...	1,756	1,159	

88. In both Chandragiri and Chittoor the outturn is very great. There is no doubt as to the returns, as the experiments I made, and also those undertaken by the Assistant Director, gave similar results. Uniformity as regards the average for each taluk could not be expected. The taluk with the greater proportion of measurements referring to the higher qualities or sorts of soils has the highest average. Chandragiri stands first, Wálajápet last; the average yield for the former being 50 per cent. in advance of the latter.

89. In determining the grain values to be assigned to each class and sort of soil for wet, though the average by the statement given above for 4-1, best black loam, is no less than 1,479 Madras measures per acre, and is an average on 214 measurements, I consider that not more than 1,200 Madras measures should be taken for the foregoing or highest taram; for the grain value to be thus adjusted to the classification requires to be so rated as to be applicable to the whole district. This figure, 1,200 Madras measures, is the yield adopted for Coimbatore and Tinnevelly for the best soil. The kyles or experiments relate to too great an extent to the more fertile taluks—Chandragiri and Chittoor—to be followed closely. It is gratifying to thus learn how extensive the yield of paddy is in these taluks and similar tracts, where the greater industry and labor of the cultivator in the matter of manure largely aids the outturn. But the yield of the series of experiments, so largely appertaining to these two taluks, is not fairly applicable to the whole district without modification. Adopting, therefore, 1,200 Madras measures to the best soil, I have adjusted the grain values to each class and sort of soil and each class of irrigation as shown in the annexed statement. The kyles are merged together for equivalent qualities of soil or sorts according to the classification table, which is also appended:—

OUTTURN—MADRAS MEASURES PER ACRE—WET PADDY.

Classification.		Revenue Department.								Settlement Department.								Proposed Grain Values.			
Class.		Number of Kyles and Average Outturn.								Number of Kyles and Average Outturn.											
III.	IV. V. VII. VIII.	Good.		Middling.		Indifferent.		Total.		Good.		Middling.		Indifferent.		Total.		Total.		1st Class.	2nd Class.	3rd Class.	4th Class.
Sort.		Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.	Number.	Outturn.				
..	1	1	1,280	4	887	..	..	5	966	188	1,562	20	974	6	635	214	1,479	219	1,467	1,200	1,150	1,100	1,050
1	2	18	1,175	14	730	6	460	38	903	578	1,369	122	855	49	537	749	1,231	787	1,215	1,100	1,050	1,000	960
2	3	17	1,084	8	735	14	485	39	798	392	1,197	135	732	39	506	566	1,039	605	1,023	1,000	950	900	850
3	4	6	1,191	11	684	..	..	17	798	140	1,112	47	606	16	449	203	957	220	945	865	820	775	730
4	5	2	1,071	1	610	..	..	3	894	13	983	8	623	..	..	21	846	24	852	775	730	690	650
5	4	..	..	..	..	..	..	..	..	3	892	..	..	..	..	3	892	3	892	680	640	600	570
..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	590	550	550	500
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,858	..				
Total Number of Kyles ..		44	..	38	..	20	..	102	..	1,311	..	332	..	110	..	1,756	..						

90. The grain values as thus proposed for lands irrigated by sources rated as first class are lower than the average outturn in respect to each taram as regards the settlement kyles and the total; but, save in one instance, they exceed the average determined on the experiments of the Revenue Department. The latter are, however, not very numerous. The area included in the first class being limited to that supplied direct from the Pálár and Ponna Anicuts, the bulk of the irrigated wet area falls under either the second or the third class, and it is the grain values of these latter classes that will generally have application to by far the greater number of villages of each taluk. There can therefore be no doubt as to the leniency of the grain values as thus adjusted to each class; and yet, as the subjoined comparative statement clearly shows, they are equivalent to, or rule somewhat higher than, the grain values of other districts, the two highest tarams in Cuddapah excepted :—

COMPARISON OF GRAIN VALUES FOR EACH CLASS OF SOIL—WET—MADRAS MEASURES PER ACRE.

District.	Group or Class.	Class of Soil. III From	III To	IV From	IV To	V From	V To	VII From	VII To	VIII From	VIII To
Cuddapah	1	1,200	400	1,300	700	900	490	500	600	600	400
Nellore	1	800	550	850	650	750	500	800	625	725	500
Chingleput	1	720	390	840	460	600	320	720	340	600	320
Salem	1	720	288	960	360	720	360	840	360	720	288
Tinnevelly	1	960	480	1,200	720	960	480	1,080	600	960	480
Coimbatore	1	1,200	500	1,200	600	900	300	1,200	360	900	300
North Arcot	1	1,100	680	1,200	775	1,000	520	1,100	680	1,000	520

91. Regarded collectively the grain values for the four classes of irrigation may be looked upon as generally in excess of the values assigned in the districts previously settled, notwithstanding that they are adjusted more or less considerably below the average outturn by the numerous experiments conducted during several years, which has rarely been the case in any other settlement.

92. *Dry Experiments.*—The series of measurements for each of the dry crops taken as standards are tabulated and given in the subjoined form according to the primary tarums for dry. They relate to four seasons (*vide* the statement at paragraph 82) and comprise both moderate and indifferent harvests :—

OUTTURN—MADRAS MEASURES PER ACRE—DRY.

Primary Taram.	Revenue Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent.		Total.		Settlement Department. Number of Kyles and Average Outturn. Good.		Middling.		Indifferent		Total.		Total. No	Total. Outturn.
							Sazza or Cumbu.											
5	..	..	..	..														
6	..	..	..	..	2	153	2	153	4	497	5	223	4	156	13	287	15	269
7	1	350	8	..	2	153	2	153	4	497	5	223	4	156	13	287	15	269
8	1	300	5	196	8	123	12	160	20	387	6	192	10	139	36	191	48	183
9	1	165	1	130	11	93	17	116	30	251	13	187	7	100	50	213	67	188
	..	..	1	109	3	57	5	89	4	253	4	153	4	117	12	174	17	149
	3	..	10	..	24	..	37	..	59	..	28	..	25	..	112	..	149	..
							176	176	1	513	..	..	..	..	1	513	2	344
							Ragi.											
5																		
6	1	472	1	318	..	..	2	395	..	..	..	..	..	..	..	..	2	395
7	1	310	1	215	3	138	5	188	..	..	..	..	..	..	..	..	5	188
	13	366	18	218	8	125	39	248	3	339	4	224	..	..	7	273	46	251
	15	..	20	..	11	..	46	..	3	..	4	..	..	..	7	..	53	..
							Aruga or Varagu.											
5	..	..	..	..														
6	..	..	..	..	1	250	..	..	..	..	..	..	..	..	..	..	1	250
7	2	358	1	250	..	..	1	250	..	..	..	..	..	..	..	..	1	250
8	1	313	1	200	..	..	1	200	6	386	..	..	..	..	6	386	7	359
9	1	240	1	187	1	90	4	248	15	395	5	224	6	152	26	306	30	298
	..	..	..	..	1	145	3	215	9	451	3	200	3	152	15	341	18	332
	4	..	4	..	2	..	1	210	..	..	3	193	..	..	3	193	4	205
							10	..	30	..	11	..	9	..	50	..	60	..

93. Though comparatively few in number, the kyles suffice, as regards sazza and aruga, for a fair estimate of the produce of each crop being framed thereon, bearing in mind the outturn taken in other settlements. For ragi the few measurements are not sufficiently distributed over the different qualities of soil to be of similar use. So far as they go they support the experience afforded by most other districts, that the yield of ragi as a rule exceeds that of sazza. I have regulated the grain values to be assigned to ragi accordingly, and indicate those proposed for each standard crop in the annexed statement. The total number of kyles and average outturn by the above statement is placed in juxta-position with the proposed grain values, and each class and sort of soil, whether there are any experiments or otherwise, is given according to the usual table, the sorts being bracketed together:—

OUTTURN—MADRAS MEASURES PER ACRE—DRY.

Classification. Class.	Sorts.	Total Kyles Number and Average Outturn. Sazza.		Ragi.		Aruga.		Proposed Grain Values for each Class of Villages. Sazza. 1st.	Sazza. 2nd.	Ragi. 1st.	Ragi. 2nd.	Aruga. 1st.	Aruga. 2nd.
II.	1	..	..	..	..	..	..	*360	..	*390	..	..	..
	2	..	..	..	..	..	..	340	..	360	..	..	..
	3	..	..	..	..	..	..	300	..	320	..	..	..
III.	1	..	..	..	..	..	..	340	290	360	310	480	400
	2	..	..	..	..	..	..	290	250	310	275	400	330
	3	..	..	..	..	..	..	250	220	275	240	330	280
	4	..	..	..	..	..	..	220	180	240	200	280	230
	5	..	..	..	..	..	..	180	150	200	165	230	180
IV.	1	15	269	2	395	1	250	180	130	165	135	180	160
	2	48	183	5	188	7	359	150	130	165	120	160	140
	3	67	188	46	251	30	298	130	115	135	..	..	..
	4	17	149	..	..	18	332						
	5	2	344	..	..	4	205						
V.	4	..	..	..	..	..	..						
	5	..	..	..	..	..	..						
VII.	5	..	..	..	..	..	..						

* The grain values for Taram II apply to both 1st and 2nd class dry villages.

94. A nominal value is appraised to the exceptional lands, limited in extent and treated as dry under Class II, in order to express their relative value as regards ordinary dry lands. The area rated under this taram is almost exclusively cultivated with paddy for one or more crops, as explained at paragraph 45. The values assigned apply equally to both first and second class villages; and only the two most valuable of the three standard crops are recognized for this taram. The grain values of sazza and ragi for the intermediate sort II-2 are fixed in agreement with the grain value adjusted to the highest ordinary dry soil III-1 and IV-1.

95. The grain values thus adopted for each crop are compared in the next statement with the valuations of other districts in respect to each class of soil. The valuations quoted are those of the highest class of each district.

COMPARISON OF GRAIN VALUES—MADRAS MEASURES PER ACRE.

Crops and Districts.	Class of Soil. III. From	III. To	IV. From	IV. To	V. From	V. To	VII. From	VII. To	VIII. From	VIII. To
Sazza.										
Cuddapah*	260	150	225	120	170	80	200	100	180	80
Salem	408	216	456	264	336	216	408	192	336	192
Nellore	325	125	250	125	175	80	175	100	140	75
North Arcot	340	180	340	180	250	130	290	150	250	130
Ragi.										
Salem	408	216	456	264	336	216	408	192	336	192
Chingleput	320	156	384	186	256	126	320	156	256	126
North Arcot	360	200	360	200	275	135	310	165	275	135
Aruga.										
Trichinopoly	672	360	840	360	552	360	672	432	432	360
Chingleput	440	276	504	306	376	246	440	276	376	246
Nellore	550	225	425	225	325	140	325	180	275	140
North Arcot	480	230	480	230	330	160	400	180	330	160

* Sub-division Taluks.

96. For sazza or cumbu the proposed values are considerably below those fixed for Salem, but exceed the outturn taken for Nellore and the sub-division taluks of Cuddapah. The latter is a rather poor tract of country. For ragi the valuations are similarly less than those of Salem, and conform with but moderate variation to those of Chingleput, being sometimes slightly higher, but generally a little in excess of the values adopted for the latter district. On the other hand, the valuations of aruga or varagu for North Arcot are invariably much below the produce of this crop as fixed for Chingleput, and greatly so as regards the valuations for Trichinopoly. There is a fair accord between the respective valuations for Nellore and North Arcot. Comparison with Coimbatore is of no avail, as an average valuation for dry grains was struck on three crops—cholum, cumbu, and ragi. In the same manner any reference to the grain values for Cuddapah other than sazza is useless, as the standard crops under consideration are not the standard crops of that district.

97. Judged by the proposals of other districts, the grain values of the several dry crops now recommended need to be regarded as moderately rated for North Arcot. They may be accepted with confidence as tending to effect the revision of the dry assessment so as not to prove burdensome to the people, and as relieving, as a rule, the pressure of the present assessment on the lower and poorer qualities of land, whilst enhancing in some measure the assessment of the better kinds of soil where lightly adjusted at present, or, as not infrequently happens, at much the same rates as the poorer qualities of soil. This will be fully explained further on.

98. *Equivalent of Grain Values in lbs. per Acre.*—These details are calculated and rendered separately in the accompanying statements for dry and wet grains. For the former the weight of the produce varies from 1,100 to 323 lbs.; for the latter from 2,700 to 1,125 lbs. of paddy. The yield of rice is two-thirds of the weight of paddy:—

ESTIMATED OUTTURN IN MADRAS MEASURES AND LBS. PER ACRE—DRY GRAINS.

Classification. Class.	Sort.	Sazza. First Class. Madras Measures.	Sazza. First Class. Lbs.	Sazza. Second Class. Madras Measures.	Sazza. Second Class. Lbs.	Ragi. First Class. Madras Measures.	Ragi. First Class. Lbs.	Ragi. Second Class. Madras Measures.	Ragi. Second Class. Lbs.	Aruga. First Class. Madras Measures.	Aruga. First Class. Lbs.	Aruga. Second Class. Madras Measures.	Aruga. Second Class. Lbs.
II.	1	360	1,022	..	..	390	1,100	..	..	..	..	..	..
	2	340	966	..	..	360	1,015	..	..	..	..	..	..
	3	300	852	..	..	320	902	..	..	..	..	..	..
III.	1	340	966	290	824	360	1,015	310	874	480	1,106	400	921
	2	290	824	250	710	310	874	275	775	400	921	330	760
	3	250	710	220	625	275	775	240	677	330	760	280	645
	4	220	625	180	511	240	677	200	564	280	645	230	530
	5	180	511	150	426	200	564	165	465	230	530	180	415
IV.	1	150	426	130	369	165	465	135	380	180	415	160	369
	2	130	369	115	327	135	380	120	338	160	369	140	323
	3	..	..	..	..	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..	..	..	..	..
	5	..	..	..	..	..	..	..	..	..	..	..	..

ESTIMATED OUTTURN IN MADRAS MEASURES AND LBS. PER ACRE—WET PADDY.

Classification. Class.	Sort.	First Class. Madras Measures.	First Class. Lbs.	Second Class. Madras Measures.	Second Class. Lbs.	Third Class. Madras Measures.	Third Class. Lbs.	Fourth Class. Madras Measures.	Fourth Class. Lbs.
III.	1	1,200	2,700	1,150	2,587	1,100	2,475	1,050	2,362
	2	1,100	2,475	1,050	2,362	1,000	2,250	960	2,160
	3	1,000	2,250	950	2,138	900	2,025	850	1,912
	4	865	1,946	820	1,845	775	1,744	730	1,643
	5	775	1,744	730	1,643	690	1,552	650	1,462
IV.	1	680	1,530	640	1,440	600	1,350	570	1,282
	2	590	1,327	550	1,237	550	1,237	500	1,125
	3	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..
	5	..	..	..	..	..	..	..	..

99. *Expenses of Cultivation.*—These details have been estimated on the basis of information recorded for certain selected villages of the four taluks by the Supervisor, Attota Ramaya, the Assistant Director, Mr. Clerk, and myself. In dry land an average of seven to eight acres to each plough according to the quality of the soil is accepted, and the average cost of a pair of bullocks is taken as Rs. 37-8-0 in the better and Rs. 27-8-0 in the poorer soils. Similarly, for wet cultivation, it is reckoned that a pair of bullocks will plough four acres of single-crop land, or an equivalent area of land partly first and partly second crop. The latter is most general, and the estimated expenses relate to one crop only. Working cattle are set down as costing from Rs. 36 to Rs. 29 the pair, at prices varying from Rs. 50 to Rs. 25, including one-fourth as buffaloes at Rs. 20. The bullocks and buffaloes are calculated to work for six and five years respectively on the average. The estimated cost thus resulting per acre for each standard dry crop and for paddy is as follows. Straw, which is a valuable commodity in this district, is not taken into account in these calculations. No provision is made for feeding the working cattle with gram, as they are not fed with gram or other grain, as a rule, in this district.

ESTIMATED EXPENSES OF CULTIVATION.

Primary Taram.	Cost per Acre for Bullocks.	Implements.	Manure.	Seed.	Wages and Labor.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
		Sazza or Cumbu.				
1 to 5	0 14 0	0 7 0	0 8 0	0 1 9	2 8 3	4 7 0
6	0 13 0	0 6 9	0 6 0	0 1 9	2 8 3	4 3 9
7	0 12 0	0 6 9	0 6 0	0 1 6	2 6 0	4 0 3
8	0 11 0	0 6 6	0 4 0	0 1 6	2 2 0	3 9 0
9	0 10 0	0 6 0	..	0 1 6	1 15 8	3 1 2
10	0 9 0	0 5 6	..	0 1 3	1 12 2	2 11 11
11	0 8 0	0 5 0	..	0 1 3	1 11 0	2 9 3
		Ragi.				
1 to 5	0 14 0	0 7 0	0 8 0	0 2 8	2 7 0	4 6 8
6	0 13 0	0 6 9	0 6 0	0 2 8	2 7 0	4 3 5
7	0 12 0	0 6 9	0 6 0	0 2 4	2 3 3	3 14 4
8	0 11 0	0 6 6	0 4 0	0 2 4	1 15 6	3 7 4
9	0 10 0	0 6 0	..	0 2 4	1 12 3	2 14 7
10	0 9 0	0 5 6	..	0 2 0	1 11 0	2 11 6
11	0 8 0	0 5 0	..	0 2 0	1 10 0	2 9 0
		Aruga or Varagu.				
4 and 5	0 14 0	0 7 0	..	0 3 4	1 14 0	3 6 4
6	0 13 0	0 6 9	..	0 3 4	1 13 3	3 4 4
7	0 12 0	0 6 9	..	0 3 0	1 11 0	3 0 9
8	0 11 0	0 6 6	..	0 3 0	1 8 9	2 13 3
9	9 10 0	0 6 0	..	0 3 0	1 6 4	2 9 4
10	0 9 0	0 5 6	..	0 2 6	1 4 2	2 5 2
11	0 8 0	0 5 0	..	0 2 6	1 4 2	2 3 8
		Wet Paddy.				
1	1 12 0	0 14 0	2 8 0	0 14 0	6 3 0	12 3 0
2	1 12 0	0 14 0	2 8 0	0 14 0	5 15 6	11 15 6
3	1 8 0	0 14 0	2 8 0	0 14 0	5 9 5	11 5 5
4	1 8 0	0 12 0	2 0 0	0 12 0	4 15 11	9 15 11
5	1 6 0	0 12 0	1 12 0	0 12 0	4 11 0	9 5 0
6	1 6 0	0 10 0	1 8 0	0 12 0	4 4 0	8 8 0
7	1 4 0	0 10 0	1 4 0	0 12 0	4 2 0	8 0 0

100. As the dry standard crops need to be taken in equal proportions in the ordinary tarams, the average expenses for dry cultivation will be as under:—

DRY CULTIVATION—AVERAGE COST PER ACRE.

Crops.	Primary Tarams. 1 to 3	4 and 5	6	7	8	9	10	11
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Sazza	4 7 0	4 7 0	4 3 9	4 0 3	3 9 0	3 1 2	2 11 11	2 9 3
Ragi	4 6 8	4 6 8	4 3 5	3 14 4	3 7 4	2 14 7	2 11 6	2 9 0
Aruga	..	3 6 4	3 4 4	3 0 9	2 13 3	2 9 4	2 5 2	2 3 8
Average ..	4 6 10	4 1 4	3 14 6	3 10 5	3 4 6	2 13 8	2 9 6	2 7 4

101. These estimates make fair provision for all the ordinary processes and expenses incidental to ordinary dry and wet cultivation, and that they are liberally framed will be evident from the subjoined comparison with similar rates for other districts:—

COMPARISON OF CULTIVATION EXPENSES.

Districts.	Dry. From	Dry. To	Wet. From	Wet. To
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Cuddapah	6 2 9	1 10 0	19 0 0	5 10 0
Nellore	5 4 0	1 3 7	10 8 3	9 9 7
Chingleput	6 0 0	3 10 0	11 0 0	4 8 0
Salem	5 12 0	3 12 0	10 14 0	3 8 0
Coimbatore	3 6 4	2 3 4	13 2 10	4 12 10
North Arcot	4 7 0	2 7 4	12 3 0	8 0 0

102. In making any comparison it is necessary to bear in mind that the commutation rate is an important factor in calculating the expenses of cultivation, and, as the commutation rate proposed for North Arcot for paddy, Rs. 95, is lower than that of the other districts,* it follows that the difference is really greater than the foregoing comparison may indicate.

	Paddy per Garce. RS.
* Cuddapah, Coimbatore, Nellore }	126
Chingleput	105

At these higher values the cultivation expenses for this district would be as under:—

Paddy per Garce. RS.	Cultivation Expenses would be RS. A. P.		RS. A. P.
126	14 7 11	to	9 9 5
107	13 1 3	to	8 9 10
105	12 14 11	to	8 8 2

103. Practically, therefore, the estimated expenses for wet now submitted have been exceeded in former settlements, as regards the districts cited, in but one district—Cuddapah, and only then as regards the higher tarams, as the calculations for Cuddapah descend to Rs. 5-10-0 per acre, whilst, as just shown, the equivalent for North Arcot is Rs. 9-9-5. For the lower tarams the expenses as worked out for Nellore are somewhat higher even than for North Arcot. As regards the expenses of dry cultivation, the same disparity occurs in respect to any comparison with either Cuddapah, Coimbatore, or Chingleput, the rate of conversion adopted in those districts being higher than the proposals for North Arcot. For Salem, an average being struck for dry and wet grains, any detailed comparison is impracticable. The expenses as worked out for dry and wet also may reasonably be accepted as fair and moderate in amount.

104. *Money Rates for Dry.*—To determine these the first process is to strike an average of the varying grain values per acre for the three standard dry crops. The next, to make the deductions already particularized for vicissitudes of seasons and cultivation expenses, and the value of the net produce, and the half net on which the money-rates require to be framed, is the result. The statement annexed below exhibits the mean value of the produce of an acre of dry land for each of the primary tarams:—

DRY GRAIN VALUES PER ACRE—SAZZA RS. 115, RAGI RS. 126, AND ARUGA RS. 75.

Primary Tarams.	Sazza. Madras Measures.	Sazza. Value.	Ragi. Madras Measures.	Ragi. Value.	Aruga. Madras Measures.	Aruga. Value.	Mean of Grain Values per Acre.
1		RS. A. P.		RS. A. P.		RS. A. P.	RS. A. P.
2	360	12 15 0		15 5 9		..	14 2 5
3	340	12 3 6	390	14 2 10	..	..	13 3 2
4	300	10 12 6	360	12 9 9	..	..	11 11 1
5	340	12 3 6	360	14 2 10	480	11 4 0	12 8 9
6	290	10 6 9	310	12 3 4	400	9 6 0	10 10 8
7	250	8 15 9	275	10 13 3	320	7 11 9	9 2 11
8	220	7 14 6	240	9 7 3	280	6 9 0	7 15 7
9	180	6 7 6	200	7 14 0	230	5 6 3	6 9 3
10	150	5 6 3	165	6 8 0	180	4 3 6	5 5 11
11	130	4 10 9	135	5 5 1	160	3 12 0	4 9 3
	115	4 2 1	120	4 11 8	140	3 4 6	4 0 9

105. The money-rates resulting from the mean value of the gross produce per acre are calculated out in the following statement. The first three of the primary tarams apply to the exceptional series, the others only to ordinary dry soils :—

DRY—CULTIVATION OF PROPOSED RATES.

Primary Tarams.	Mean of Grain Values per Acre.	Deductions. One-fifth for Vicissitudes of Seasons.	Deductions. Cultivation Expenses.	Deductions. Total.	Net Value.	Half Net.	Proposed Rates.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1	14 2 5	2 13 3	4 6 10	7 4 1	6 14 4	3 7 2	3 8 0
2	13 3 2	2 10 2	4 6 10	7 1 0	6 2 2	3 1 1	3 0 0
3	11 11 1	2 5 5	4 6 10	6 12 3	4 14 10	2 7 5	2 8 0
4	12 8 9	2 8 2	4 1 4	6 9 6	5 15 3	2 15 7	3 0 0
5	10 10 8	2 2 1	4 1 4	6 3 5	4 7 3	2 3 7	2 4 0
6	9 2 11	1 13 5	3 14 6	5 11 11	3 7 0	1 11 6	1 12 0
7	7 15 7	1 9 6	3 10 5	5 3 11	2 11 8	1 5 10	1 6 0
8	6 9 3	1 5 0	3 4 6	4 9 6	1 15 9	0 15 10	1 0 0
9	5 5 11	1 1 2	2 13 8	3 14 10	1 7 1	0 11 6	0 12 0
10	4 9 3	0 14 8	2 9 6	3 8 2	1 1 1	0 8 6	0 8 0
11	4 0 9	0 12 11	2 7 4	3 4 3	0 12 6	0 6 3	0 6 0

106. The rates as applicable to each class and sort of soil and each class of villages are next tabulated.

TABLE OF PROPOSED RATES—DRY.

Classification. Class. II.	III.	IV.	V.	VII.	VIII.	First Class. Taram.	First Class. Rate.	Second Class. Taram.	Second Class. Rate.
Sorts.							RS. A. P.		RS. A. P.
1	..	..	..	..	..	1	3 8 0	1	3 8 0
2	..	..	..	..	..	2	3 0 0	2	3 0 0
3	..	..	..	..	..	3	2 8 0	3	2 8 0
..	1	1	..	..	..	4	3 0 0	5	2 4 0
..	2	2	..	..	..	5	2 4 0	6	1 12 0
..	3	3	..	1	..	6	1 12 0	7	1 6 0
..	4	4	1	2	1	7	1 6 0	8	1 0 0
..	5	5	2	3	2	8	1 0 0	9	0 12 0
..	..	..	3	4	3	9	0 12 0	10	0 8 0
..	..	..	4	5	4	10	0 8 0	11	0 6 0
..	..	..	5	..	5				

107. The rates applicable to the ordinary dry soils or primary tarams 4 to 11, excluding the first three tarams which comprise the exceptional series only, are contrasted with the sanctioned dry rates of other districts in the annexed table :—

COMPARISON OF DRY RATES OF DISTRICTS ACCORDING TO CLASSES—ENTRIES, RS. AS.

Class and Sort.	Salem. First.	Salem. Second.	Salem. Third.	Salem. Fourth.	Chingleput. First.	Chingleput. Second.	Chingleput. Third.	Coimbatore. First.	Coimbatore. Second.	North Arcot. First.	North Arcot. Second.
3 1	1 12	1 12	1 4	1 0	2 8	2 0	1 12	2 0	1 8	3 0	2 4
3 2	1 4	1 4	1 0	0 12	1 12	1 8	1 4	1 8	1 4	2 4	1 12
3 3	0 8	0 8	0 6	0 5	1 8	1 4	1 0	1 4	1 0	1 12	1 6
3 4	..	..	..	..	1 0	1 2	0 8	1 0	0 12	1 6	1 0
3 5	..	..	..	..	0 12	0 8	0 6	0 12	0 8	1 0	0 12
4 1	2 8	2 8	1 12	1 4	3 0	2 8	2 0	2 0	1 8	3 0	2 4
4 2	1 12	1 12	1 4	1 0	2 8	2 0	1 12	1 8	1 4	2 8	1 12
4 3	1 0	0 12	0 8	0 6	1 12	1 8	1 4	1 4	1 0	2 4	1 6
4 4	..	..	..	..	1 8	1 4	1 0	1 0	0 12	1 6	1 0
4 5	..	..	..	..	1 0	0 12	0 8	0 12	0 8	1 0	0 12
5 1	1 12	1 12	1 4	1 0	2 8	2 0	1 12	2 0	1 8	3 0	2 4
5 2	1 4	1 4	1 0	0 12	1 12	1 8	1 4	1 8	1 4	2 4	1 12
5 3	0 8	0 8	0 6	0 4	1 8	1 4	1 0	1 4	1 0	1 12	1 6
5 4	..	..	..	..	1 0	1 2	0 8	1 0	0 12	1 6	1 0
5 5	..	..	..	..	0 12	0 8	0 6	0 12	0 8	1 0	0 12
6 1	1 12	1 12	1 4	1 0	2 8	2 0	1 12	2 0	1 8	3 0	2 4
6 2	1 4	1 4	1 0	0 12	1 12	1 8	1 4	1 8	1 4	2 4	1 12
6 3	0 8	0 8	0 6	0 5	1 8	1 4	1 0	1 4	1 0	1 12	1 6
6 4	..	..	..	..	1 0	1 2	0 8	1 0	0 12	1 6	1 0
6 5	..	..	..	..	0 12	0 8	0 6	0 12	0 8	1 0	0 12
7 1	2 8	2 8	1 12	1 4	3 0	2 8	2 0	2 0	1 8	3 0	2 4
7 2	1 12	1 12	1 4	1 0	2 8	2 0	1 12	1 8	1 4	2 4	1 12
7 3	1 0	0 12	0 8	0 6	1 12	1 8	1 4	1 4	1 0	1 12	1 6
7 4	..	..	..	..	1 8	1 4	1 0	1 0	0 12	1 6	1 0
7 5	..	..	..	..	1 0	0 12	0 8	0 12	0 8	1 0	0 12
8 1	4 0	3 0	2 4	2 0	3 0	2 8	2 0	2 0	1 8	3 0	2 4
8 2	3 0	2 0	1 8	1 4	2 8	2 0	1 12	1 8	1 4	2 4	1 12
8 3	1 12	1 4	1 0	0 12	2 0	1 8	1 4	1 4	1 0	1 12	1 6
8 4	0 12	0 8	0 8	0 8	1 8	1 4	1 0	1 0	0 12	1 6	1 0
8 5	..	..	..	..	1 4	1 0	0 8	1 0	0 12	1 6	1 0

Class and Sort.	Nellore. First.	Nellore. Second.	Nellore. Third.	Nellore. Fourth.	Cuddapah. First.	Cuddapah. Second.	Cuddapah. Third.	Cuddapah. Fourth.
3 1	4 0	3 8	3 0	2 8	4 0	3 0	2 4	2 0
3 2	2 8	2 0	1 12	1 8	3 0	2 0	1 8	1 4
3 3	1 12	1 8	1 4	1 2	1 12	1 4	1 0	0 12
3 4	1 4	1 0	0 12	0 12	1 4	1 0	0 8	0 8
3 5	..	..	..	..	..	..	..	..
4 1	3 0	2 8	2 4	1 12	3 0	2 8	1 8	1 4
4 2	1 12	1 8	1 4	1 4	2 8	2 0	1 4	1 0
4 3	1 4	1 0	0 12	1 0	2 0	1 4	1 0	0 12
4 4	1 0	1 0	0 8	0 8	1 12	1 4	0 8	0 8
4 5	..	..	..	..	1 8	1 0	0 8	0 8
5 1	4 0	3 8	3 0	2 8	4 0	3 0	2 4	2 0
5 2	2 8	2 0	1 12	1 8	3 0	2 0	1 8	1 4
5 3	1 12	1 8	1 4	1 4	2 0	1 4	1 0	0 12
5 4	1 4	1 0	0 12	1 0	1 12	1 4	0 8	0 8
5 5	..	..	..	..	1 8	1 0	0 8	0 8
6 1	4 0	3 8	3 0	2 8	4 0	3 0	2 4	2 0
6 2	2 8	2 0	1 12	1 8	3 0	2 0	1 8	1 4
6 3	1 12	1 8	1 4	1 4	2 0	1 4	1 0	0 12
6 4	1 4	1 0	0 12	1 0	1 12	1 4	0 8	0 8
6 5	..	..	..	..	1 8	1 0	0 8	0 8
7 1	4 0	3 8	3 0	2 8	4 0	3 0	2 4	2 0
7 2	2 8	2 0	1 12	1 8	3 0	2 0	1 8	1 4
7 3	1 12	1 8	1 4	1 4	2 0	1 4	1 0	0 12
7 4	1 4	1 0	0 12	1 0	1 12	1 4	0 8	0 8
7 5	..	..	..	..	1 8	1 0	0 8	0 8
8 1	4 0	3 8	3 0	2 8	4 0	3 0	2 4	2 0
8 2	2 8	2 0	1 12	1 8	3 0	2 0	1 8	1 4
8 3	1 12	1 8	1 4	1 4	2 0	1 4	1 0	0 12
8 4	1 4	1 0	0 12	1 0	1 12	1 4	0 8	0 8
8 5	..	..	..	..	1 8	1 0	0 8	0 8

108. The rates start from Rs. 3 downwards and, in respect to the Rs. 3 rate, are in accord with the rates sanctioned for Salem to the west and Chingleput to the east. Generally, the first-class rates are almost identical with those of a similar class for Chingleput and conform fairly with those of Salem and of Nellore as well. The second-class rates—applying to villages other than those comprised within the valley of the Palar — coincide very closely with the first-class or normal rates of Coimbatore, as there is only a slight difference in the higher tarams, the rates of the latter district being the lower of the two. On the whole, except with Cuddapah for the lower qualities of soil, the comparison fails to indicate any very marked disparity. The red soils of North Arcot conform more with the fertile soils of Salem than the more sterile soils of Cuddapah. There is a considerable extent of good and really fine red soil in the taluks of the district bordering Salem, and the rates proposed do, as they should, coincide with those of Salem, whilst they differ from those of Cuddapah. The district is mostly separated from Cuddapah by a considerable range of hills and the conformation of the country on either side is very dissimilar, with the exception perhaps of the Palmanér Taluk. The latter is however separated from the Cuddapah frontier by the Punganúr Zemindari.

109. *Money Rates for Wet.*—These are calculated out in the subjoined statement for the four different groups under which the irrigation sources of the several villages have been classed. The expenses of cultivation are the same for each class and sort of soil throughout the four classes, and the grain produce of each class is that already worked out at paragraph 89 :—

WET—CALCULATION OF PROPOSED RATES. PADDY, RS. 95 PER GARCE.

Primary Taram.	Grain Produce.	Value.	Deductions.			Net Value.	Half Net.	Proposed Rate.
			One-fifth for Vicissitudes of Season.	Cultivation Expenses.	Total.			
First Class.	M. M.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
I	.. .. ..							
II	.. .. ..	1,200	35 10 0	7 2 0	12 3 0	19 5 0	16 5 0	8 2 6	8 0 0
III	.. .. ..	1,100	32 10 6	6 8 6	11 15 6	18 8 0	14 2 6	7 1 3	7 0 0
IV	.. .. ..	1,000	29 11 0	5 15 0	11 5 5	17 4 5	12 6 7	6 3 3	6 0 0
V	.. .. ..	865	25 10 10	5 2 2	9 15 11	15 2 1	10 8 9	5 4 4	5 4 0
VI	.. .. ..	775	23 0 0	4 9 7	9 5 0	13 14 7	9 1 5	4 8 2	4 8 0
VII	.. .. ..	680	20 3 0	4 0 7	8 8 0	12 8 7	7 10 5	3 13 2	3 12 0
	.. .. ..	590	17 8 3	3 8 1	8 0 0	11 8 0	6 0 3	3 0	3 0 0
Second Class.									
I									
II	.. .. ..	1,150	34 2 3						
III	.. .. ..	1,050	31 2 9	6 13 3	12 3 0	19 0 3	15 2 0	7 9 0	7 8 0
IV	.. .. ..	950	28 3 3	6 3 9	11 15 6	18 3 3	12 15 6	6 7 9	6 8 0
V	.. .. ..	820	24 5 6	5 10 3	11 5 5	16 15 8	11 3 7	5 9 9	5 8 0
VI	.. .. ..	730	21 10 9	4 13 11	9 15 11	14 13 10	9 7 8	4 11 10	4 12 0
VII	.. .. ..	640	19 0 0	4 5 4	9 5 0	13 10 4	8 0 5	4 0 2	4 0 0
	.. .. ..	550	16 5 3	3 12 10	8 8 0	12 4 10	6 11 2	3 5 7	3 4 0
Third Class.				3 4 3	8 0 0	11 4 3	5 1 0	2 8 6	2 8 0
I									
II	.. .. ..	1,100	32 10 6						
III	.. .. ..	1,000	29 11 0	6 8 6	12 3 0	18 11 6	13 15 0	6 15 6	7 0 0
IV	.. .. ..	900	26 11 6	5 15 0	11 15 6	17 14 6	11 12 6	5 14 3	6 0 0
V	.. .. ..	775	23 0 0	5 5 6	11 5 5	16 10 11	10 0 7	5 0 3	5 0 0
VI	.. .. ..	690	20 7 9	4 9 7	9 15 11	14 9 6	8 6 6	4 3 3	4 4 0
VII	.. .. ..	600	17 13 0	4 1 7	9 5 0	13 6 7	7 1 2	3 8 7	3 8 0
	.. .. ..	550	16 5 3	3 9 0	8 8 0	12 1 0	5 12 0	2 14 0	3 0 0
Fourth Class.				3 4 3	8 0 0	11 4 3	5 1 0	2 8 6	2 8 0
I									
II	.. .. ..	1,050	31 2 9						
III	.. .. ..	960	28 8 0	6 3 9	12 3 0	18 6 9	12 12 0	6 6 0	6 8 0
IV	.. .. ..	850	25 3 9	5 11 2	11 15 6	17 10 8	10 13 4	5 6 8	5 8 0
V	.. .. ..	730	21 10 9	5 0 9	11 5 5	16 6 2	8 13 7	4 6 9	4 8 0
VI	.. .. ..	650	19 4 9	4 5 4	9 15 11	14 5 3	7 5 6	3 10 9	3 12 0
VII	.. .. ..	570	16 14 9	3 13 9	9 5 0	13 2 9	6 2 0	3 1 0	3 0 0
	.. .. ..	500	14 13 6	3 6 2	8 8 0	11 14 2	5 0 7	2 8 3	2 8 0
				2 15 6	8 0 0	10 15 6	3 14 0	1 15 0	2 0 0

110. According to the classification table, the rates are tabulated in the form appended below in respect to each irrigation class :—

CLASSIFICATION.					WET CLASSES.							
Class.					First.		Second.		Third.		Fourth.	
III.	IV.	V.	VII.	VIII.	Taram.	Rate.	Taram.	Rate.	Taram.	Rate.	Taram.	Rate.
Sorts.												
..	1	..	..	..		RS. A. P.		RS. A. P.		RS. A. P.		RS. A. P.
1	2	..	..	..	1	8 0 0	2	7 8 0	3	7 0 0	4	6 8 0
2	3	1	1	..	3	7 0 0	4	6 8 0	5	6 0 0	6	5 8 0
3	4	2	2	1	5	6 0 0	6	5 8 0	8	5 0 0	10	4 8 0
4	5	3	3	2	7	5 4 0	9	4 12 0	11	4 4 0	13	3 12 0
5	..	4	4	3	10	4 8 0	12	4 0 0	14	3 8 0	16	3 0 0
..	..	5	5	4	13	3 12 0	15	3 4 0	16	3 0 0	17	2 8 0
			..	5	16	3 0 0	17	2 8 0	17	2 8 0	18	2 0 0

111. The wet rates aggregate eighteen altogether and are, I am aware, liable to be considered more numerous than the rates proposed in the settlement of districts more recently or at present under operations, viz., eight wet rates in Chingleput, nine in Coimbatore, and twelve in Cuddapah. There were however eighteen rates provided for Nellore. I am unable to accept for North Arcot that the difference between the classification sorts is identical with the variation existing between one class of irrigation as arranged for settlement and another—the next in the scale of classing. In the higher tarams the difference proposed between one sort and the next is one rupee, whilst the classes vary only 8 annas. Consequently the rates for wet as worked out appear rather numerous, and there is an absence of the usual symmetry or uniformity of progression in the scale of rates thus proposed. However, the symmetry of the table of rates is a minor detail, of no real importance though desirable for the sake of simplicity, if attainable without detriment to the revision of assessment generally.

112. As in classing the sources of irrigation, as explained at paragraph 49, each source has been separately dealt with, and not so adjusted for the village generally as to bring all the sources of irrigation under one group, the want of unison noticeable between the rates of one class and the next is of no real significance. There was a similar disparity in the table of rates for Nellore, and they were introduced without any difficulty and are easily understood. In fact, they are more readily intelligible to the ryots generally when thus arranged than when merged under one group only for each village.

113. The wet rates of assessment as proposed for this district are compared with those sanctioned for other districts in the subjoined table :—

COMPARISON OF WET RATES OF DISTRICTS ACCORDING TO GROUPS OF IRRIGATION—ENTRIES, Rs. As.

Class and Sort.	Cuddapah.			Coimbatore.			Chingleput.			North Arcot.			Salem.					Nellore.				
	First.	Second.	Third.	First.	Second.	Third.	First.	Second.	Third.	First.	Second.	Third.	First.	Second.	Third.	Fourth.	Fifth.	First.	Second.	Third.	Fourth.	Fifth.
1	9 0	8 0	7 0	10 0	8 0	6 0	6 4	5 0	4 0	7 0	6 8	6 0	7 0	6 0	5 0	4 0	3 0	7 8	7 0	6 8	5 8	4 8
2	7 0	6 0	6 0	8 0	6 0	5 0	5 0	4 0	3 8	6 8	5 8	5 0	6 0	5 0	4 0	3 0	2 8	6 0	5 8	5 0	4 8	3 12
3	5 0	4 8	4 0	6 0	4 0	4 0	4 0	3 8	3 0	6 0	4 12	4 8	5 0	4 0	3 8	2 8	1 4	5 0	4 8	4 0	3 8	3 0
4	3 8	3 0	2 8	4 0	3 8	3 0	3 8	3 0	2 8	5 4	4 0	3 4	4 8	3 8	3 0	2 0	1 0	4 8	4 0	3 8	3 0	2 8
5	3 0	2 8	2 0	3 8	3 0	2 8	3 0	2 8	2 0	4 8	3 12	3 0	4 0	3 0	2 8	1 8	0 12	4 0	3 8	3 0	2 8	2 0
6	2 8	2 0	1 8	3 0	2 8	2 0	2 8	2 0	1 8	4 0	3 8	2 8	3 8	2 8	2 0	1 4	0 8	3 8	3 0	2 8	2 0	1 8
7	2 0	1 8	1 4	2 8	2 0	1 8	2 0	1 8	1 4	3 8	3 0	2 8	3 0	2 8	2 0	1 4	0 4	3 0	2 8	2 0	1 8	1 4
8	1 8	1 4	1 0	2 0	1 8	1 4	1 8	1 4	1 0	3 0	2 8	2 0	2 8	2 0	1 8	1 0	0 0	2 8	2 0	1 8	1 4	1 0
1	10 0	9 0	8 0	12 0	10 0	8 0	7 8	6 4	5 0	8 0	7 8	7 0	8 0	7 0	6 0	5 0	4 0	8 0	7 0	6 0	5 0	4 0
2	8 0	7 0	7 0	10 0	8 0	6 0	6 4	5 0	4 0	7 8	6 8	6 0	7 8	6 0	5 0	4 0	3 0	7 8	7 0	6 0	5 0	4 0
3	6 0	5 0	4 0	8 0	6 0	5 0	5 0	4 0	3 8	6 0	5 0	4 8	6 0	5 0	4 0	3 0	2 8	6 0	5 8	5 0	4 8	3 12
4	4 0	3 8	3 0	6 0	4 0	4 0	4 0	3 8	3 0	5 4	4 0	3 4	4 8	3 8	3 0	2 0	1 0	4 8	4 0	3 8	3 0	2 8
5	3 0	2 8	2 0	3 8	3 0	2 8	3 0	2 8	2 0	4 8	3 12	3 0	4 0	3 0	2 8	1 8	0 12	4 0	3 8	3 0	2 8	2 0
6	2 8	2 0	1 8	3 0	2 8	2 0	2 8	2 0	1 8	4 0	3 8	2 8	3 8	2 8	2 0	1 4	0 8	3 8	3 0	2 8	2 0	1 8
7	2 0	1 8	1 4	2 8	2 0	1 8	2 0	1 8	1 4	3 8	3 0	2 8	3 0	2 8	2 0	1 4	0 4	3 0	2 8	2 0	1 8	1 4
8	1 8	1 4	1 0	2 0	1 8	1 4	1 8	1 4	1 0	3 0	2 8	2 0	2 8	2 0	1 8	1 0	0 0	2 8	2 0	1 8	1 4	1 0
1	9 0	8 0	7 0	10 0	8 0	6 0	6 4	5 0	4 0	7 0	6 8	6 0	7 0	6 0	5 0	4 0	3 0	7 8	7 0	6 8	5 8	4 8
2	7 0	6 0	6 0	8 0	6 0	5 0	5 0	4 0	3 8	6 8	5 8	5 0	6 0	5 0	4 0	3 0	2 8	6 0	5 8	5 0	4 8	3 12
3	5 0	4 8	4 0	6 0	4 0	4 0	4 0	3 8	3 0	6 0	4 12	4 8	5 0	4 0	3 8	2 8	1 4	5 0	4 8	4 0	3 8	3 0
4	3 8	3 0	2 8	4 0	3 8	3 0	3 8	3 0	2 8	5 4	4 0	3 4	4 8	3 8	3 0	2 0	1 0	4 8	4 0	3 8	3 0	2 8
5	3 0	2 8	2 0	3 8	3 0	2 8	3 0	2 8	2 0	4 8	3 12	3 0	4 0	3 0	2 8	1 8	0 12	4 0	3 8	3 0	2 8	2 0
6	2 8	2 0	1 8	3 0	2 8	2 0	2 8	2 0	1 8	4 0	3 8	2 8	3 8	2 8	2 0	1 4	0 8	3 8	3 0	2 8	2 0	1 8
7	2 0	1 8	1 4	2 8	2 0	1 8	2 0	1 8	1 4	3 8	3 0	2 8	3 0	2 8	2 0	1 4	0 4	3 0	2 8	2 0	1 8	1 4
8	1 8	1 4	1 0	2 0	1 8	1 4	1 8	1 4	1 0	3 0	2 8	2 0	2 8	2 0	1 8	1 0	0 0	2 8	2 0	1 8	1 4	1 0
1	9 0	8 0	7 0	10 0	8 0	6 0	6 4	5 0	4 0	7 0	6 8	6 0	7 0	6 0	5 0	4 0	3 0	7 8	7 0	6 8	5 8	4 8
2	7 0	6 0	6 0	8 0	6 0	5 0	5 0	4 0	3 8	6 8	5 8	5 0	6 0	5 0	4 0	3 0	2 8	6 0	5 8	5 0	4 8	3 12
3	5 0	4 8	4 0	6 0	4 0	4 0	4 0	3 8	3 0	6 0	4 12	4 8	5 0	4 0	3 8	2 8	1 4	5 0	4 8	4 0	3 8	3 0
4	3 8	3 0	2 8	4 0	3 8	3 0	3 8	3 0	2 8	5 4	4 0	3 4	4 8	3 8	3 0	2 0	1 0	4 8	4 0	3 8	3 0	2 8
5	3 0	2 8	2 0	3 8	3 0	2 8	3 0	2 8	2 0	4 8	3 12	3 0	4 0	3 0	2 8	1 8	0 12	4 0	3 8	3 0	2 8	2 0
6	2 8	2 0	1 8	3 0	2 8	2 0	2 8	2 0	1 8	4 0	3 8	2 8	3 8	2 8	2 0	1 4	0 8	3 8	3 0	2 8	2 0	1 8
7	2 0	1 8	1 4	2 8	2 0	1 8	2 0	1 8	1 4	3 8	3 0	2 8	3 0	2 8	2 0	1 4	0 4	3 0	2 8	2 0	1 8	1 4
8	1 8	1 4	1 0	2 0	1 8	1 4	1 8	1 4	1 0	3 0	2 8	2 0	2 8	2 0	1 8	1 0	0 0	2 8	2 0	1 8	1 4	1 0
1	9 0	8 0	7 0	10 0	8 0	6 0	6 4	5 0	4 0	7 0	6 8	6 0	7 0	6 0	5 0	4 0	3 0	7 8	7 0	6 8	5 8	4 8
2	7 0	6 0	6 0	8 0	6 0	5 0	5 0	4 0	3 8	6 8	5 8	5 0	6 0	5 0	4 0	3 0	2 8	6 0	5 8	5 0	4 8	3 12
3	5 0	4 8	4 0	6 0	4 0	4 0	4 0	3 8	3 0	6 0	4 12	4 8	5 0	4 0	3 8	2 8	1 4	5 0	4 8	4 0	3 8	3 0
4	3 8	3 0	2 8	4 0	3 8	3 0	3 8	3 0	2 8	5 4	4 0	3 4	4 8	3 8	3 0	2 0	1 0	4 8	4 0	3 8	3 0	2 8
5	3 0	2 8	2 0	3 8	3 0	2 8	3 0	2 8	2 0	4 8	3 12	3 0	4 0	3 0	2 8	1 8	0 12	4 0	3 8	3 0	2 8	2 0
6	2 8	2 0	1 8	3 0	2 8	2 0	2 8	2 0	1 8	4 0	3 8	2 8	3 8	2 8	2 0	1 4	0 8	3 8	3 0	2 8	2 0	1 8
7	2 0	1 8	1 4	2 8	2 0	1 8	2 0	1 8	1 4	3 8	3 0	2 8	3 0	2 8	2 0	1 4	0 4	3 0	2 8	2 0	1 8	1 4
8	1 8	1 4	1 0	2 0	1 8	1 4	1 8	1 4	1 0	3 0	2 8	2 0	2 8	2 0	1 8	1 0	0 0	2 8	2 0	1 8	1 4	1 0

114. The rates for North Arcot rule lower than those sanctioned for Cuddapah and Coimbatore and the higher groups of Salem, and somewhat higher, as might be anticipated, than the rates for Chingleput, and generally higher than the rates for Nellore. The highest rates for the first three groups in the latter district and North Arcot are identical. On the whole the rates may, I hope, be deemed to be framed with moderation and suited to the circumstances of the district.

115. *Comparison of Proposed Rates with existing Rates of Assessment.*—The dry and wet rates of assessment at present in force, according to the revision effected in 1857 by Mr. Banbury, number thirty-seven dry and twenty-five wet rates as given in the annexed form. They refer to the prevailing land measure or cawny—1-32 acres :—

PRESENT RATES OF ASSESSMENT PER CAWNY—1-32 ACRES.

Dry-Rates.									Wet Rates.					
1	6	...	14	2	4	27	...	13	1	10	...	14	4	12
2	5	...	15	2	2	28	...	12	2	9	8	15	4	8
3	4	8	16	2	...	29	...	11	3	9	...	16	4	4
4	4	...	17	1	14	30	...	10	4	8	8	17	4	...
5	3	12	18	1	12	31	...	9	5	8	...	18	3	12
6	3	8	19	1	10	32	...	8	6	7	8	19	3	8
7	3	4	20	1	8	33	...	7	7	7	...	20	3	4
8	3	...	21	1	6	34	...	6	8	6	8	21	3	...
9	2	14	22	1	4	35	...	5	9	6	...	22	2	12
10	2	12	23	1	2	36	...	4	10	5	12	23	2	8
11	2	10	24	1	...	37	...	3	11	5	8	24	2	4
12	2	8	25	...	15	...	...	...	12	5	4	25	2	...
13	2	6	26	...	14	...	...	...	13	5	...	...	...	...

116. The lowest of the dry rates are rarely met with and must apply to a very limited extent. In many villages the rates do not descend below one rupee a cawny, or 12 annas an acre. The lowest dry rate now proposed is 6 annas an acre, and the incidence of the proposals as regards the lower rates show that, notwithstanding the heavy excess in area determined by survey, the contemplated revision will lighten the assessment of the poorer soils and prove beneficial especially in respect to the large unoccupied waste area existing in most of the taluks.

117. The proposed rates per acre that are recommended in substitution of those per cawny above given aggregate only 11 dry and 18 wet rates as under :—

TABLE OF PROPOSED RATES AND NUMBER OF TERAMS.

Dry.		Wet.			
Taram.	Rate.	Taram.	Rate.	Taram.	Rate.
	RS. A. P.		RS. A. P.		RS. A. P.
1	3 8 0				
2	3 0 0	1	8 0 0	10	4 8 0
3	2 8 0	2	7 8 0	11	4 4 0
4	3 0 0	3	7 0 0	12	4 0 0
5	2 4 0	4	6 8 0	13	3 12 0
6	1 12 0	5	6 0 0	14	3 8 0
7	1 6 0	6	5 8 0	15	3 4 0
8	1 0 0	7	5 4 0	16	3 0 0
9	0 12 0	8	5 0 0	17	2 8 0
10	0 8 0	9	4 12 0	18	2 0 0
11	0 6 0	...	...	...	...
		...	...	...	...

118. Of the previous dry rates those above Rs. 4 applied only to the old garden land and in the table of rates are specified as "garden lands irrigated by baling." The lands unde these exceptional tarams are mostly garden lands in the vicinity of villages and are limited in extent and now classed in like manner to the block in which situated. The highest ordinary dry rate now in force is therefore Rs. 4 per cawny, equivalent to Rs. 3 per acre, which is identical with highest ordinary dry rate proposed according to the foregoing table, Taram IV.

119. When advocating the reduction and revision of the rates of assessment, both wet and dry, throughout the district—which measure was subsequently effected by Mr. Bambury in 1857—

Report to Board, No. 127, dated 23rd Oct. 1854, para. 36.

Mr. Bourdillon proposed "that the highest rate for one crop in this district should be Rs. 10 a cawny." This is equivalent to Rs. 7-8-0 the acre and tallies exactly with the highest rate now recommended for the second-class irrigation comprising river channels and river-fed tanks, and also tanks of large capacity and extensive drainage supply, likewise the best of the spring or kasam channels. In the first-class the rate is 8 annas higher, or Rs. 8 per acre, but this supplies only to tanks well fed from the Pálár and Ponna Anicut channels, viz., the Kaveripak, Mahendravadi, Sholingapuram Kodakal, and other tanks at the head of the channels directly supplied from those works, which have thus been greatly improved by the construction of the anicuts—subsequent to Mr. Bourdillon's report—at considerable cost by the State. It is hardly likely that even Mr. Bourdillon would have regarded a slightly higher rate as undesirable under circumstances so advantageous to the villages and lands benefited by the irrigation in question. Tanks indirectly fed by the anicut supply, or those that only receive water occasionally during the season, when the river may be well in flood and may have filled the tanks above, are rated under the second class. It will be seen that the area included under the first irrigation class is comparatively of limited extent and that, save in Chandragiri, the area classified under the highest wet rate in either the first or second class is of moderate extent and therefore not liable to any doubt.

120. *Provision for Vicissitudes of Seasons.*—The deduction made on this account for both dry and wet in the foregoing calculations is 20 per cent. or one-fifth of the estimated produce of each class of soil. This allowance is liberal and is intended to include provision for any positions of either dry and wet holdings that may be uncultivable or unproductive from being used for any public purpose. Except where the area may be very insignificant, it will have been separated from the holding. In irrigated lands the provision is ample for all purposes, but should necessarily be allowed to meet the precariousness of seasons, the ravages of insects, and liability to blight to which wet crops are more or less subject at times.

121. *Proposals framed on the existing Wet and Dry Area.*—The proposals of this report refer to the area in occupation at the time of classification, when holdings were identified and registered. The fasli or revenue year appertaining to each taluk is noted marginally. The area standing in the revenue accounts of each as dry or wet is rendered accordingly in this report, and consequently the scheme of revision of assessment worked out thereon, by applying the rates of assessment now proposed to the area in occupation in each taluk at the time of classification, indicates what the effect of the revision would have been in respect to each taluk if then put in force without any changes or adjustments being made to the irrigated area, and also without any consideration or revision of the charge for second-crop irrigation. Throughout the proposals double-crop land has had one-third of the assessment deducted as the second-crop charge, and the two-thirds have been regarded as the charge for the first crop. The amount of the reduction for each taluk will be explained later on. For the purpose of showing the result of the proposed revision all wet land has thus been viewed as single crop. The adjustments to and from the wet area, which are likely to be very extensive in this district as regards the former, will be given effect to at the time of settlement, when also the area to be dealt with for second crop will be determined and disposed of. I shall have occasion to refer again to this.

Taluks.	Fasli.
Chandragiri	1,289
Chittoor	1,289
Gudiyátam	1,289
Wálajápet	1,287

122. *Talukwar Financial Results of the Proposals—Chandragiri.*—These are given for the Chandragiri Taluk in the following statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Account.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
Dry	Second Class ..	16,374	17,708	1 1 3	18,754	1 2 4	+ 1,046	+ 6
Wet	Second Class ..	3,694	17,876	4 13 5	23,159	6 4 4	+ 5,283	+ 30
	Third do. ..	1,797	7,528	4 3 0	9,466	5 4 4	+ 1,938	+ 26
	Fourth do. ..	272	865	3 3 0	1,136	4 2 10	+ 271	+ 31
Total ..	..	5,763	26,269	4 8 11	33,761	5 13 9	+ 7,492	+ 29
Total Dry and Wet.	..	22,137	43,977	1 15 9	52,515	2 5 11	+ 8,538	+ 19

123. The dry lands of the taluk have all been placed in the second class, and the proposals will raise the assessment from an average of Rs. 1-1-3 now paid per acre according to the survey area to Rs. 1-2-4, equivalent to an increase of 6 per cent. or Rs. 1,046. Of this amount, Rs. 155 accrues on the lands rated under Taram II, so that on the ordinary dry lands the enhancement is only Rs. 891. The addition mainly falls on the better qualities of soil, the proposals reducing the assessment on the poorer sorts of soil (*vide* Appendix A).

124. The irrigated lands are rated in the second, third, and fourth classes. The second class includes the bulk of the area, and the average rate per acre by survey will be increased from Rs. 4-13-5 to Rs. 6-4-4, or by 30 per cent., or Rs. 5,283. For the third and fourth classes Rs. 4-3-0 and Rs. 3-3-0 will be raised to Rs. 5-4-4 and Rs. 4-2-10, or by Rs. 1,938 and Rs. 271 respectively, equivalent to 26 and 31 per cent. On the whole the demand will exceed the former revenue by Rs. 7,492, or 29 per cent., the average rate rising from Rs. 4-8-11 to Rs. 5-13-9. On the revenue area the present assessment of the taluk averages Rs. 1-6-1 for dry and Rs. 5-7-3 for wet, the excess area by survey being 27 and 20 per cent. respectively. Compared with the average rate by the revenue area, the proposed rate shows a decrease of As. 3-9 in dry and an increase of As. 6-6 in wet. The enhancement in wet is largest on the better lands also.

125. *Chittoor.*—For Chittoor the results are as under:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
Dry	Second Class ..	71,440	68,716	0 15 5	75,461	1 0 9	+ 6,745	+ 10
Wet	First Class ..	1,117	5,177	4 10 1	6,697	5 15 10	+ 1,520	+ 29
	Second do. ..	8,944	41,602	4 10 5	51,184	5 11 6	+ 9,582	+ 23
	Third do. ..	7,448	32,223	4 5 3	39,191	5 4 2	+ 6,968	+ 22
	Fourth do. ..	1,396	5,148	3 11 0	6,205	4 7 1	+ 1,057	+ 21
Total ..	..	18,905	84,150	4 7 3	1,03,277	5 7 5	+ 19,127	+ 23
Total Dry and Wet.	..	90,345	1,52,866	1 11 1	1,78,738	1 15 8	+ 25,872	+ 17

126. The dry lands of this taluk likewise fall in the second class. The present rate is As. 15-5 per acre by survey, the proposed rate Rs. 1-0-9, and the increase Rs. 6,745 or 10 per cent., of which Rs. 3,770 appertain to land classed under Taram II, so on the ordinary dry land the addition to the assessment is only Rs. 2,975, and this may be said to wholly apply to the better lands, the results (Appendix A) showing invariably more or less reduction on the poorer soils.

127. The wet lands are included in all four classes. Under the first class or Ponna Anicut irrigation the area is limited, and at present only pays Rs. 4-10-1 per acre by survey, and the proposed rate, Rs. 5-15-10, will add Rs. 1,520 to the assessment or 29 per cent. For the second class the present rate is Rs. 4-10-5, that proposed Rs. 5-11-6, and the increase Rs. 9,582 or 23 per cent. For the third class similarly the rates are Rs. 4-5-3 and Rs. 5-4-2, augmenting the assessment by Rs. 6,968 or 22 per cent., and for the fourth class Rs. 3-11-0 and 4-7-1, increasing the same by Rs 1,057 or 21 per cent. For the whole taluk the present average rate per acre by survey, Rs. 4-7-3, will be raised to Rs. 5-7-5, equivalent to Rs. 19,127, enhancement of assess-

ment, or 23 per cent. On the revenue area the taluk at present pays Rs. 1-3-7 for dry and Rs. 5-4-11 for wet land per acre. The proposed rates thus exhibit a decrease of As. 2-10 per acre in dry, and an increase of As. 2-6 in wet. The survey excess on the taluk averaged 27 per cent. in dry and 19 per cent. in wet land in occupation; hence the vast difference in the averages the land now pays per acre by the revenue and by the survey area.

128. *Gudiyátam.*—Like results for Gudiyátam are embodied in the annexed statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	RS.
Dry ..	1st Class	49,049	72,259	1 7 7	73,495	1 8 0	+ 1,236	+ 2
	2nd do.	23,951	26,631	1 1 10	21,769	0 14 7	— 4,862	— 18
	Total	73,000	98,890	1 5 8	95,264	1 4 10	+ 3,626	— 4
Wet ..	1st Class	1,016	4,128	4 1 9	5,800	5 11 4	+ 1,620	+ 39
	2nd do.	15,203	75,790	4 15 9	83,449	5 7 10	+ 7,659	+ 10
	3rd do.	3,820	14,656	4 6 8	15,948	4 12 10	+ 1,292	+ 9
	4th do.	469	1,954	4 2 8	1,789	3 13 0	— 165	— 8
	Total ..	20,008	96,580	4 13 3	1,06,986	5 5 6	+ 10,406	+ 11
	Total Dry and Wet..	93,008	1,95,470	2 1 8	2,02,250	2 2 10	+ 6,780	+ 3

129. The villages of this taluk are placed partly in the first and partly in the second class for dry. The present rates average per acre by survey for each class Rs. 1-7-7 and Rs. 1-1-10, those proposed Rs. 1-8-0 and As. 14-7, increasing the assessment of the first-class villages by Rs. 1,236 or 2 per cent. and diminishing that of the second-class villages by Rs. 4,862 or 18 per cent., being a net reduction on the taluk of Rs. 3,626 or 4 per cent. There is, however, an increase on the lands included in Taram II of Rs. 1,747, and, omitting this, there is a reduction on the ordinary dry lands of Rs. 5,373—Rs. 221 in the first and Rs. 5,152 in the second class. The assessment to be thus foregone mainly relieves the ordinary and the poorer qualities of soil (*vide* Appendix A).

130. The irrigated lands are placed in all four gradations. The area in the first class, supplied by the Ponna Anicut in the vicinity of Tiruvallam, is limited in extent. The present average rate is only Rs. 4-1-9 per acre by survey, that by the proposals Rs. 5-11-4, and the increase amounts to Rs. 1,620 or 39 per cent. For the second class the present rate is Rs. 4-15-9, that proposed Rs. 5-7-10, adding Rs. 7,659 to the revenue or 10 per cent. In like manner for the third class the rates are Rs. 4-6-8 and Rs. 4-12-10, enhancing the demand by Rs. 1,292 or 9 per cent., and for the fourth class Rs. 4-2-8 and Rs. 3-13-0, decreasing the same by Rs. 165 or 8 per cent. The average rate per acre for the whole taluk, at present Rs. 4-13-3 by survey area, will be raised to Rs. 5-5-6, or by Rs. 10,406, equivalent to 11 per cent. By the revenue area the present rates for the taluk average Rs. 1-7-11 for dry and Rs. 5-3-2 for wet. The proposed rates on the survey area are therefore As. 3-1 lower for dry and As. 2-4 higher for wet. The survey disclosed an average excess of 10 and 8 per cent. respectively on the dry and wet lands in occupation.

131. *Wálajápet.*—Similar results for Wálajápet are furnished in the next statement:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	RS.
Dry ..	1st Class	17,367	20,119	1 2 6	22,277	1 4 6	+ 2,158	+ 11
	2nd do.	62,227	64,422	1 0 6	64,959	1 0 9	+ 537	+ 1
	Total ..	79,594	84,541	1 1 0	87,236	1 1 6	+ 2,695	+ 3
Wet ..	1st Class	12,474	54,610	4 6 1	67,460	5 6 6	+ 12,850	+ 24
	2nd do.	25,710	1,14,979	4 7 7	1,29,588	5 0 8	+ 14,609	+ 13
	3rd do.	11,803	44,776	3 12 8	52,780	4 7 7	+ 8,004	+ 18
	4th do.	2,077	7,328	3 8 5	8,724	4 3 2	+ 1,396	+ 19
	Total ..	52,064	2,21,693	4 4 2	2,58,552	4 15 5	+ 36,859	+ 17
	Total Dry and Wet..	131,658	3,06,234	2 5 3	3,45,788	2 10 0	+ 39,554	+ 13

132. In this taluk also the villages are rated for dry both under the first and second-classes. Under the former, however, comparatively few villages are included. By survey area the present rates average for each class Rs. 1-2-6 and Rs. 1-0-6 per acre, and the proposed rates similarly Rs. 1-4-6 and Rs. 1-0-9, being an increase of Rs. 2,158 or 11 per cent. for the first class, and Rs. 537 or 1 per cent. for the second class. Excluding the increase resulting on Taram II; Rs. 1,789, the proposals involve an increase of Rs. 906 or 1 per cent. on the whole taluk, viz., Rs. 2,027 or 10 per cent. excess on the first-class villages, and Rs. 1,121 or 2 per cent. decrease on the second class. Throughout both classes the proposals more or less relieve the pressure of the assessment on the medium and poorer qualities of soil and augment the demand on the lower sorts. This may be observed from Appendix A.

133. The wet area of the taluk comprises all four classes of irrigation, and the bulk of the land rated under the first class or appertaining to anicut irrigation. The present rate thereon by survey is Rs. 4-6-1 per acre, that proposed is Rs. 5-6-6, or an increase in the assessment of Rs. 12,850 or 24 per cent. The second class is at present paying Rs. 4-7-7 per acre by survey and the proposed rate is Rs. 5-0-8, enhancing the demand by Rs. 14,609 or 13 per cent. Similarly the third and fourth classes pay at present Rs. 3-12-8 and Rs. 3-8-5, and the rate proposed is Rs. 4-7-7 and Rs. 4-3-2, adding Rs. 8,004 and Rs. 1,396 respectively to the demand or 18 and 19 per cent. On the whole the wet assessment of the taluk will be raised by Rs. 36,859 or 17 per cent., the present rate per acre by survey being Rs. 4-4-2 and that proposed Rs. 4-15-5. The average rate by the revenue area is at present Rs. 1-3-2 for dry and Rs. 4-10-0 for wet, compared with Rs. 1-1-6 and Rs. 4-15-5 respectively by the proposals, or a decrease of As. 1-8 on the dry area, and an increase of As. 5-5 on the wet. The excess area by survey averages 13 per cent. on dry and 9 per cent. on the wet area.

134. *Total Results on four Taluks.*—On each class of dry and wet the total results of the four taluks are as under:—

Dry or Wet.	Class.	Survey Area.	By Revenue Accounts.		By Proposals.		Difference.	
			Assessment.	Average.	Assessment.	Average.	Columns 4 and 6.	Percentage.
1	2	3	4	5	6	7	8	9
		ACRES.	RS.	RS. A. P.	RS.	RS. A. P.	RS.	RS.
Dry ..	1st Class	66,416	92,378	1 6 3	95,772	1 7 1	+ 3,394	+ 4
	2nd do.	178,992	1,77,477	1 0 4	1,80,943	1 0 8	+ 3,466	+ 2
	Total ..	2,40,408	2,69,855	1 1 11	2,76,715	1 2 5	+ 6,860	+ 3
Wet ..	1st Class	14,607	63,067	4 6 1	79,957	5 7 7	+ 15,990	+ 25
	2nd do.	53,551	2,50,217	4 10 9	2,87,350	5 5 10	+ 37,133	+ 15
	3rd do.	24,368	99,183	4 1 2	1,17,385	4 13 1	+ 18,202	+ 18
	4th do.	4,214	15,295	3 10 1	17,854	4 3 10	+ 2,559	+ 17
	Total ..	96,740	4,28,692	4 6 11	5,02,576	5 3 1	+ 73,884	+ 17
	Total Dry and Wet.	3,37,148	6,98,547	2 1 2	7,79,291	2 4 11	+ 80,744	+ 12

135. The first-class dry villages average at present Rs. 1-6-3 per acre by survey, and it is proposed to fix the assessment at Rs. 1-7-1 per acre, or Rs. 3,394 and 4 per cent. in excess of the present demand. Similarly, the second-class villages pay Pies 4 per acre, and by the proposals the rate is Rs. 1-0-8, or Rs. 3,466 more than the existing assessment, equivalent to 2 per cent. For both classes the increase amounts to Rs. 6,860; but, as there is an excess on the lands rated as Taram II of Rs. 7,461, it follows that on the ordinary dry soils the net result of the proposals is a reduction of Rs. 602.

136. The rate of assessment that the lands under first-class sources of irrigation at present average by survey is Rs. 4-6-1 per acre, and by the proposals the same will be Rs. 5-7-7 per acre, occasioning an increase of Rs. 15,990 or 25 per cent. For the second class the present rate of Rs. 4-10-9 will be raised to Rs. 5-5-10, adding Rs. 37,133 or 15 per cent. to the demand; and for the third and fourth classes the present rates, Rs. 4-1-2 and Rs. 3-10-1, will be increased to Rs. 4-13-1 and Rs. 4-3-10 per acre respectively, enhancing the revenue by Rs. 18,202 and Rs. 2,559 or 18 and 17 per cent. for each class. On the total wet area the proposals will modify the present rate of Rs. 4-6-11 per acre by survey area to Rs. 5-3-1 and increase the assessment now derived from the irrigated lands of these taluks by Rs. 73,884 or 17 per cent. The average rates paid at present for the whole of the four taluks is Rs. 1-5-0 per acre for dry, and Rs. 4-14-8 for wet. By the proposals, therefore, the average rate on dry land will be As. 2-7 less, and for the wet lands As. 4-5 in excess of the foregoing rates. The increase by survey averages 17 per cent. on the dry area and 11 per cent. on the wet in occupation. On

both dry and wet an increase of Rs. 80,744 results from the proposals, averaging 12 per cent. on the present assessment. Appendix A shows the variation by the proposals for each class and sort of soil for each taluk.

137. A further comparison is instituted for each taluk in respect to the incidence of the existing assessment on the basis of the revenue area and the proposed assessment on survey area :—

COMPARISON OF PROPOSALS ON REVENUE AND SURVEY AREA.

Taluks.	By Revenue Accounts.			By Proposals.			Difference.			
	Area.	Assessment.	Average.	Area.	Assessment.	Average.	Columns 2 and 5.	Percentage.	Columns 3 and 6.	Percentage.
1	2	3	4	5	6	7	8	9	10	11
Dry.	ACRES.	RS.	RS. A. P.	ACRES.	RS.	RS. A. P.	ACRES.	ACRES.	RS.	RS.
Chandragiri ..	12,851	17,709	1 6 1	16,374	18,754	1 2 4	+ 3,523	+ 27	+ 1,045	+ 6
Chittoor ..	56,176	68,716	1 3 7	71,441	75,462	1 0 9	+ 15,265	+ 27	+ 6,746	+ 10
Gudiyátam ..	66,292	98,890	1 7 11	73,090	95,263	1 4 10	+ 6,778	+ 10	− 3,627	− 4
Wálajápet ..	70,469	84,541	1 3 2	79,593	87,236	1 1 6	+ 9,124	+ 13	+ 2,695	+ 3
Total ..	205,718	2,69,856	1 5 0	240,498	2,76,715	1 2 5	+ 34,690	+ 17	+ 6,859	+ 3
Wet.										
Chandragiri ..	4,815	26,269	5 7 3	5,763	33,761	5 13 9	+ 948	+ 20	+ 7,492	+ 29
Chittoor ..	15,852	84,150	5 4 11	18,905	1,03,278	5 7 5	+ 3,053	+ 19	+ 19,128	+ 23
Gudiyátam ..	18,581	96,580	5 3 2	20,008	1,06,986	5 5 6	+ 1,427	+ 8	+ 10,406	+ 11
Wálajápet ..	47,956	2,21,695	4 10 0	52,065	2,58,553	4 15 5	+ 4,109	+ 9	+ 36,858	+ 17
Total ..	87,204	4,28,694	4 14 8	96,741	5,02,578	5 3 1	+ 9,537	+ 11	+ 73,884	+ 17
Grand Total ..	292,922	6,98,550	..	337,149	7,79,293	..	+ 44,227	+ 15	+ 80,743	+ 12

138. The present and proposed average rates of assessment for each class of dry and wet are placed in juxtaposition for easy comparison in the annexed form :—

COMPARISON OF AVERAGE RATES OF ASSESSMENT, PRESENT AND PROPOSED, PER ACRE BY SURVEY.

Taluks.	Present or Proposed.	Dry Classes.			Wet Classes.				
		First.	Second.	Total.	First.	Second.	Third.	Fourth.	Total.
Chandragiri	Present ..	RS. A. P. ..	RS. A. P. 1 1 3	RS. A. P. 1 1 3	RS. A. P. ..	RS. A. P. 4 13 5	RS. A. P. 4 3 0	RS. A. P. 3 3 0	RS. A. P. 4 8 11
	Proposed ..	..	1 2 4	1 2 4	..	6 4 4	5 4 4	4 2 11	5 13 9
Chittoor	Present ..	..	0 15 5	0 15 5	4 10 1	4 10 5	4 5 3	3 11 0	4 7 3
	Proposed ..	..	1 0 9	1 0 9	5 15 10	5 11 6	5 4 2	4 7 1	5 7 5
Gudiyátam	Present ..	1 7 7	1 1 10	1 5 8	4 1 9	4 15 9	4 6 8	4 2 8	4 13 3
	Proposed ..	1 8 0	0 14 7	1 4 10	5 11 4	5 7 10	4 12 10	3 13 0	5 5 6
Wálajápet	Present ..	1 2 6	1 0 7	1 1 0	4 6 1	4 7 7	3 12 8	3 8 5	4 4 2
	Proposed ..	1 4 6	1 0 9	1 1 6	5 6 6	5 0 8	4 7 7	4 3 2	4 15 5
Total ..	Present ..	1 6 3	1 0 4	1 1 11	4 6 1	4 10 9	4 1 2	3 10 1	4 6 11
	Proposed ..	1 7 1	1 0 8	1 2 5	5 7 7	5 5 10	4 13 1	4 3 10	5 3 1

139. The highest dry average rate at present is that of the first-class villages of Gudiyátam, the lowest that of the Chittoor second-class villages. The proposed highest and lowest dry rates are for the first and second-class villages of Gudiyátam respectively. For the second-class villages the proposed rates for Chittoor and Wálajápet average the same, Rs. 1-0-9 per acre: that for Chandragiri is rather higher, Rs. 1-2-4; whilst for the limited number of villages rated as second-class in Gudiyátam the average rate is only As. 14-7.

140. For wet, the average rate at present prevails highest throughout the 2nd-class villages of Gudiyátam, Rs. 4-15-9, the like class for Chandragiri being but little less, Rs. 4-13-5. The other rates for the chief classes may be ranged in order as follows :—

		RS	A.	P.
Chittoor ...	2nd Class ...	4	10	5
	1st do. ...	4	10	1
Wálajápet ...	2nd do. ...	4	7	7
Gudiyátam ...	3rd do. ...	4	6	8
Wálajápet ...	1st do. ...	4	6	1
Chittoor ...	3rd do. ...	4	5	3
Chandragiri ...	3rd do. ...	4	3	0
Gudiyátam ...	1st do. ...	4	1	9

In Chittoor and Wálajápet the 2nd-class rates now rule higher than those of the 1st class; whilst in Gudiyátam the 1st-class rates average less than the rates of the other three classes. By the revision proposed the average rate for the 1st-class irrigation exceeds that of the other classes in the same taluk. The rates descend gradually from Rs. 5-15-10 for Chittoor, Rs. 5-11-5 for Gudiyátam, and Rs. 5-6-6 for Wálajápet for the 1st-class, the average being slightly less for each lower class. Whilst thus regular in their incidence as regards each taluk, when compared one taluk with another, there is considerable disparity in the rates needing explanation.

141. For instance, the highest average wet rate does not appertain to 1st-class irrigation but to the 2nd-class irrigation of Chandragiri, viz., Rs. 6-4-4, which at first sight may appear singular. But it has to be borne in mind that the application of similar rates by classes to the classification of several taluks must necessarily produce somewhat different results in respect to average rates. The incidence of the classification varies in each, and the proportion of the different soils, good, medium, and indifferent, is a varying quantity. Thus, for the rich lands in Chandragiri, assessed at 2nd-class wet rates, a higher average rate results than for the 1st class or anicut irrigation in the other three taluks which comprise relatively a greater percentage of soil of the lower qualities. This is in accordance with Mr. Banbury's experience when he carried out the revision of 1857; for, in sanctioning the proposals when submitted in detail, the Government remark, paragraph 2 of Extracts of Minutes of Consultation of 11th November 1857, No. 1,150:—"The Additional Sub-Collector has now assimilated, as far as possible, the nunjah rates in these taluks with those in the others, and has convinced himself, by personal inquiry, that perfect equality in the mean rates of all the taluks is impracticable on account of the land being more fertile in some tracts than in others, thus the rates in Chandragiri and Chittoor are still higher than in the other taluks, on account of real local advantages possessed by those two taluks which render the imposition of a higher assessment reasonable." I was only aware of this after I had penned the preceding remarks.

142. *Area and Assessment of Unoccupied Land.*—The annexed abstract furnishes full particulars in this respect for both dry and wet and each class of villages :—

UNOCCUPIED AREA.

Taluks.	Dry.				Wet.			
	Class.	Survey Area.	Assessment.	Average Rate.	Class.	Survey Area.	Assessment.	Average Rate.
Chandragiri	2	ACRES. 13,066	RS. 9,362	RS. A. P. 0 11 6	2	ACRES. 605	RS. 2,725	RS. A. P. 4 8 0
	..	..	..	..	3	480	2,098	4 5 11
	..	..	..	..	4	66	276	4 3 9
Total ..	..	13,066	9,362	0 11 6	..	1,151	5,099	4 6 11
Chittoor	2	41,088	28,168	0 11 0	1	130	703	5 7 0
	..	..	..	..	2	1,277	6,020	4 11 5
	..	..	..	..	3	1,019	4,593	4 8 0
	..	..	..	..	4	419	1,555	3 11 5
Total ..	..	41,088	28,168	0 11 0	..	2,845	12,871	4 8 4
Gudiyátam	1	18,765	19,387	1 0 6	1	151	801	5 5 0
	2	8,025	5,316	0 10 7	2	2,255	9,690	4 4 9
	..	..	..	..	3	495	2,112	4 4 3
	..	..	..	..	4	128	403	3 2 4
Total ..	..	26,790	24,703	0 14 9	..	3,029	13,006	4 4 8

UNOCCUPIED AREA.

Taluks.	Dry. Class.	Survey Area.	Assessment.	Average Rate.	Wet. Class.	Survey Area.	Assessment.	Average Rate.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Wálajápet	1	8,741	8,187	0 15 0	1	1,309	5,301	4 0 10
	2	50,014	33,756	0 10 10	2	2,682	9,800	3 10 6
	..	..	..	..	3	1,143	3,991	3 7 10
	..	..	..	..	4	135	433	3 3 8
Total ..	..	58,755	41,943	0 11 5	..	5,269	19,525	3 11 4
Total	1	27,506	27,574	1 0 0	1	1,590	6,805	4 4 6
	2	112,193	76,602	0 10 11	2	6,819	28,235	4 2 3
	..	..	..	..	3	3,137	12,794	4 1 3
	..	..	..	..	4	748	2,667	3 9 2
Total . ..	..	139,699	1,04,176	0 11 11	..	12,294	50,501	4 1 8

143. The proportion that the occupied and unoccupied dry lands bear one to the other in each taluk, and a comparison of the proposed average rate of assessment for each head, is indicated in the subjoined statement :—

COMPARISON OF OCCUPIED AND UNOCCUPIED AREA.

Taluks.	Class.	Total Area.	Occupied Area. Area.	Percentage.	Average Rate.	Unoccupied. Area.	Percentage.	Average Rate
		ACRES.	ACRES.		RS. A. P.	ACRES.		RS. A. P.
Chandragiri	2	29,341	16,374	56	1 2 4	13,066	44	0 11 6
Chittoor	2	112,529	71,440	64	1 0 9	41,088	36	0 11 0
Gudiyátam	1	67,814	49,049	72	1 8 0	18,765	28	1 0 6
	2	31,976	23,951	75	0 14 7	8,025	25	0 10 7
Total ..	..	99,790	73,000	73	1 4 10	26,790	27	0 14 9
Wálajápet	1	26,108	17,367	67	1 4 6	8,741	33	0 15 0
	2	112,241	62,227	55	1 0 9	50,014	45	0 10 10
Total ..	..	138,349	79,594	58	1 1 6	58,755	42	0 11 5
Total..	1	93,922	66,416	71	1 7 1	27,506	29	1 0 0
	2	286,087	173,992	61	1 0 8	112,193	39	0 10 11
Total ..	..	380,009	240,408	63	1 2 5	139,699	37	0 11 11

144. Of the assessed dry area 37 per cent. is now unoccupied, and the extent may be regarded as considerable. From Appendix A it may be observed that the unoccupied lands are mainly rated under the medium and lower sorts of each class of soil, and as the proposed rates on these sorts invariably reduce the incidence of the present assessment for the lands in occupation, it follows that the assessment of the waste lands will similarly be reduced by the proposed settlement, and that consequently considerable impetus may be expected to be given to the extension of occupation. For each taluk the average rates for the waste approximate pretty closely to two-thirds of the rate on the occupied area. The percentage of the unoccupied area is least in the Gudiyátam Taluk, and the rate for the 1st-class dry villages is highest in that taluk. In explaining the classification I have mentioned, paragraph 44, that further inspection and revision will be necessary to the classification of this taluk, and the rating of these lands will then be closely scrutinized, and modified should there be occasion for revision.

145. Unoccupied wet area is equivalent to 13 per cent. of the total area assessed for wet. As explained at paragraph 121, the land thus exhibited as wet waste is the land so registered at present in the Revenue accounts. At settlement, when the changes from and to the irrigated area are considered, such waste lands will, to the extent that may be unirrigable, be adjusted to dry, and probably the acreage will be considerably diminished. The whole of this area cannot therefore be reckoned as likely to be hereafter occupied as wet. Compared with the average wet rates proposed for the land in occupation, those on the unoccupied area are moderate.

146. *Area and Assessment under each Money rate.*—Details in this respect for the occupied and unoccupied dry and wet area are furnished in the annexed form. The incidence of the assessment proposed on the unoccupied lands compared with those in occupation may be gathered from this abstract—

PERCENTAGE OF AREA ASSESSED AT EACH RATE.

Primary Taram.	Rate.	Occupied. Acres.	Percentage.	Unoccupied. Acres.	Percentage.	Total. Acres.	Percentage.
	RS. A. P.	DRY.					
1	3 8 0	262	..	5	..	267	..
2	3 0 0	2,614	1	44	..	2,658	1
3	2 8 0	2,163	1	38	..	2,201	1
4	3 0 0	579	..	19	..	598	..
5	2 4 0	5,997	2	244	..	6,241	2
6	1 12 0	28,282	12	1,729	1	30,011	8
7	1 6 0	57,713	24	7,902	6	65,615	17
8	1 0 0	68,778	29	23,377	17	92,155	24
9	0 12 0	51,620	21	54,567	39	106,187	28
10	0 8 0	20,604	9	45,631	33	66,235	17
11	0 6 0	1,797	1	6,043	4	7,840	2
	Total ..	240,409	100	139,599	100	380,008	100
		WET.					
1	8 0 0	221	..	2	..	223	..
2	7 8 0	1,852	2	56	..	1,908	2
3	7 0 0	1,912	2	39	..	1,951	2
4	6 8 0	12,376	13	252	2	12,628	12
5	6 0 0	9,435	10	299	3	9,734	9
6	5 8 0	19,037	20	698	5	19,735	18
7	5 4 0	4,553	5	302	3	4,855	4
8	5 0 0	9,386	10	627	5	10,013	9
9	4 12 0	13,390	14	1,724	14	15,114	14
10	4 8 0	4,044	4	572	5	4,616	4
11	4 4 0	7,061	7	916	8	7,977	7
12	4 0 0	6,146	6	2,089	17	8,235	8
13	3 12 0	2,082	2	600	5	2,682	3
14	3 8 0	2,010	2	792	6	2,802	3
15	3 4 0	1,295	1	1,353	11	2,648	2
16	3 0 0	1,319	1	1,101	9	2,420	2
17	2 8 0	588	1	864	7	1,452	1
18	2 0 0	34	..	6	..	40	..
	Total ..	96,741	100	12,292	100	109,033	100

147. For the dry lands in occupation only 4 per cent. are assessed above Rs. 2 per acre; 40 per cent. above 1 rupee; 29 per cent. at rupee 1, and 31 per cent. at lower rates than 1 rupee. The unoccupied lands rated at more than 1 rupee per acre comprise 29 per cent.; those at 1 rupee, 24 per cent.; and those less than 1 rupee, 47 per cent. Wet lands exceeding Rs. 6 per acre form 16 per cent. of the irrigated area; those above Rs. 5 being 47 per cent., and those at and below Rs. 5 per acre 53 per cent. The bulk of the area is well distributed between the various rates from Rs. 4 to Rs. 6-8-0 per acre.

148. *Application of Proposals to Inam Lands.*—The dry and wet Inam area of each taluk the gradations under which arranged, and the proposed assessment and average rate per acre for the dry and wet classes, are all specified in the subjoined statement :—

TOTAL INAM AREA INCLUDING SERVICE INAMS.

Taluks.	Dry. Class.	Survey Area.	Proposed Assessment.	Average.	Wet. Class.	Survey Area.	Proposed Assessment.	Average.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Chandragiri	2	12,552	10,423	0 13 4	2	2,121	13,877	6 8 8
	..	..	..	..	3	2,238	11,600	5 2 2
	..	..	..	..	4	183	941	5 2 0
Total ..	..	12,552	10,423	0 13 4	..	4,542	26,318	5 12 8

TOTAL INAM AREA, INCLUDING SERVICE INAM.

Taluks.	Dry. Class.	Dry. Survey Area.	Dry. Proposed Assessment.	Dry. Average.	Wet. Class.	Wet. Survey Area.	Wet. Proposed Assessment.	Wet. Average.
		ACRES.	RS.	RS. A. P.		ACRES.	RS.	RS. A. P.
Chittoor	2	18,120	18,506	1 0 4	1	123	771	6 4 4
	..	..	..	..	2	4,093	23,931	5 13 6
	..	..	..	..	3	3,672	19,498	5 5 0
	..	..	..	..	4	757	3,311	4 5 3
Total ..	..	18,120	18,506	1 0 4	..	8,645	47,511	5 7 11
Gudiyátam	1	8,184	11,902	1 7 3	1	322	1,953	6 1 1
	2	5,673	5,456	0 15 5	2	3,318	18,667	5 10 0
	..	..	..	..	3	757	3,786	5 0 0
	..	..	..	..	4	128	477	3 11 8
Total ..	..	13,857	17,358	1 4 1	..	4,525	24,883	5 8 0
Wálajápet	1	2,570	3,640	1 6 8	1	1,923	10,889	5 10 7
	2	7,234	6,637	0 14 8	2	4,194	22,245	5 4 10
	..	..	..	..	3	1,185	5,418	4 9 2
	..	..	..	..	4	112	476	4 4 0
Total ..	..	9,804	10,277	1 0 9	..	7,414	39,028	5 4 3
Total	1	10,754	15,542	1 7 2	1	2,368	13,613	5 12 0
	2	43,579	41,022	0 15 1	2	13,726	78,720	5 11 9
	..	..	..	..	3	7,852	40,202	5 1 11
	..	..	..	..	4	1,180	5,205	4 6 6
Total ..	..	54,333	56,564	1 0 8	..	25,126	1,37,740	5 7 9

149. Three-fifths of the dry Inam area appertains to the Chandragiri and Chittoor Taluks, where Kattubadi Inams still largely prevail in former Poliyam villages. Except in the 2nd-class villages of Gudiyátam, and 1st class of Wálajápet, where the area is rather limited, the proposed average rates generally are slightly lower than for the occupied area of like classes. In Chandragiri the difference is rather considerable, very extensive tracts of scrub jungle forming part of some Inam holdings in a few villages of that taluk. These have been rated in the lowest taram, and help to reduce the average. The Inam dry area in the latter taluk is equal to three-fourths of the Government area in occupation. It is different in wet. The average rates are generally slightly higher than the corresponding averages of the lands in ordinary occupation. The exceptions are the 2nd class of Chandragiri, and the 4th class of Chittoor and Gudiyátam. Generally wet Inams occur in the better and ordinary qualities of soil.

150. *Detailed Description of Inam Area.*—Under the head of Inam, lands held at permanent or special rates, or on cowle for a term of years, have been included. Particulars of the actual extent of the Ordinary, Service, Tusdeek and Valavadi Inams are afforded in the following statement, as also of the other tenures enumerated. The Bagayat Poramboke lands are rent free, and formerly were the private property of the Nabob of the Carnatic and have passed by sale into other hands:—

Tusdeck Inam—Lands assigned in place of money payments to Pagodas.

DETAILS OF INAM AND OTHER AREAS INCLUDED THEREWITH.

	Chandragiri. Dry.	Chandragiri. Wet.	Chittoor. Dry.	Chittoor. Wet.	Gudiyátam. Dry.	Gudiyátam. Wet.	Wálajápet. Dry.	Wálajápet. Wet.	Total. Dry.	Total. Wet.
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
Oridinary Inam	10,978	2,719	9,019	2,831	4,128	1,573	2,396	1,776	26,521	8,899
Service do.	1,574	714	7,529	2,717	6,755	1,621	6,785	4,002	22,643	9,054
Tusdeek do.	..	..	1,067	899	906	1,243	73	570	2,046	2,712
Valavadi do.	..	513	..	..	..	..	..	..	..	513
Dasabandam Inam	..	596	233	2,097	..	..	..	..	233	2,693
Total Inam proper ..	12,552	4,542	17,848	8,544	11,789	4,437	9,254	6,348	51,443	23,871
Government grants	..	..	89	47	..	..	..	4	89	51
Cowle or Rayamputta	..	..	183	54	..	..	..	..	183	54
Poramboke Bagayet	..	..	..	..	2,068	88	550	1,062	2,618	1,150
Total Special Tenures ..	..	..	272	101	2,068	88	550	1,066	2,890	1,255
Total ..	12,552	4,542	18,120	8,645	13,857	4,525	9,804	7,414	54,333	25,126

151. *Comparison of Assessment included in this Report with the Revenue Demand.*—The following statement furnishes full particulars in this respect. There is a slight difference, Rs. 180-2-0, which will be attended to at settlement. It appertains to no less than 593 villages by survey:—

Particulars.	Chandragiri, Fasli 1280.	Chittoor, Fasli 1280.	Gudiyátam, Fasli 1282.	Wálajápet, Fasli 1287.	Total.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Total Demand	53,773 4 10	1,73,986 14 7	2,13,596 15 9	3,17,931 15 2	7,59,289 2 4
Add.					
Transfers from other villages..	391 1 0	566 2 11	1,443 7 9	94 3 2	2,494 14 10
Omissions in addition ..	..	56 14 8		15 15 11	72 14 7
Total ..	54,164 5 10	1,74,610 0 2	2,15,040 7 6	3,18,042 2 3	7,61,856 15 9
Deduct.					
Second-crop Assessment ..	6,462 9 0	18,982 1 9	16,992 11 2	11,595 11 0	54,033 0 11
Omitted under Poramboke ..	434 9 1	1,742 2 8	795 1 5	..	2,971 13 2
Transfer to other villages ..	3,223 3 10	867 8 6	1,468 8 8	81 7 5	5,640 12 5
Excess in addition	1 8 3	32 13 10	..	..	34 6 1
Puttas not identificable ..	5 4 4	1 15 6	..	..	7 3 10
Assessment of lands in dispute settled to other villages ..	20 11 10	105 8 1	..	..	126 3 11
Lands needing to be identified at Settlement and now omitted	17 10 11	..	295 10 6	..	313 5 5
Total ..	10,165 9 3	21,732 2 4	19,551 15 9	11,677 2 5	63,126 13 9
Balance ..	43,998 12 7	1,52,877 13 10	1,95,488 7 9	3,06,364 15 10	6,98,730 2 0
Assessment included in this report	43,978 0 0	1,52,866 0 0	1,95,470 0 0	3,06,236 0 0	6,98,550 0 0
Difference to be adjusted at Settlement	20 12 7	11 13 10	18 7 9	128 15 10	180 2 0

152. *Assessment proportioned to Second-crop or Double-crop Lands.*—The foregoing statement shows the assessment deducted as the second-crop charge, alluded to at paragraph 121, to amount to Rs. 54,033. The deduction is largest in the Chittoor Taluk and least in Chandragiri; and allowing the present assessment of the consolidated or double-crop area to average about Rs. 7-8-0 per acre, or Rs. 5 for the first and Rs. 2-8-0 for the second crop, the above amount may be regarded as representing 21,613 acres of double-crop land out of a total area of 96,740 acres for the four taluks.

153. *Second-crop Assessment and Water-rate.*—Besides the sum just specified a greater or less amount is realized each year, according to the nature of the season, for second-crop cultivation on single-crop wet land. Details in this respect, and of water-rate levied for irrigation extended to dry land, is furnished for recent years, prior and subsequent to the famine, in the following table; first, for the four taluks under consideration; secondly, for the whole district:—

SECOND-CROP ASSESSMENT OF YEARS SPECIFIED.

Taluks.	1872-73. Second Crop.	1872-73. Water-rate.	1873-74. Second Crop.	1873-74. Water-rate.	1874-75. Second Crop.	1874-75. Water-rate.	1877-78. Second Crop.	1877-78. Water-rate.
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Chandragiri	3,532	5,240	3,200	4,498	3,931	6,377	3,335	2,929
Chittoor	14,128	16,101	11,715	12,338	16,592	18,808	10,599	8,220
Gudiyátam	11,921	17,025	8,221	13,308	11,500	20,806	9,953	5,666
Wálajápet	21,669	14,909	21,628	15,267	27,231	22,473	18,657	7,067
Total ..	51,250	53,275	44,764	45,411	59,254	68,464	42,544	23,882
Palmanér	2,879	1,665	1,350	1,710	2,897	2,942	2,402	1,182
Vellore	1,025	10,266	358	6,744	709	16,425	846	7,576
Arcot	565	10,329	314	6,855	675	15,926	557	1,932
Pólúr	8,332	4,463	657	8,306	4,431	14,567	1,082	7,705
Wandiwash	18,327	13,713	6,044	8,939	18,282	18,946	7,974	6,782
Total for District ..	82,378	93,711	53,487	77,965	86,248	1,37,270	55,405	49,059

154. During these years the second-crop assessment for the four taluks varied from Rs. 59,254 to Rs. 42,544, and the water-rate similarly from Rs. 68,464 to Rs 23,882. Taking the second-crop assessment to average Rs. 2-8-0 per acre, the equivalent area would be abou

23,700 acres; and supposing the extent paying water-rate to be all under paddy, then at the usual rate of Rs. 3-8-0 per cawny or Rs. 2-10-0 per acre the area would approximate to 26,082 acres. The charge for second crop on single-crop land in 1874-75 exceeded the second-crop assessment of the registered double-crop land of the four taluks, Rs. 54,033—*vide* paragraph 152. The very extensive revision that will be requisite to the wet area may be readily foreseen from these details. In 1874-75 the second-crop assessment and water-rate aggregated Rs. 2,23,518 for the whole district.

155. *Total probable Increase of Assessment by Proposals.*—The increase indicated by the financial results for the four taluks, given at paragraph 134, assumes the whole of the wet area to be single crop only. Some further enhancement is sure to accrue on the lands at present double crop, the second-crop assessment of which, as above explained, needs to be taken as Rs. 54,033. And, as the proposals add 17 per cent. to the assessment for a single crop, it may fairly be concluded that the increase on the second-crop assessment will be a slightly higher rate or 20 per cent. This will augment the estimated increase by Rs. 10,836; and the revision of the wet area will still further enhance this amount, for it has just been shown, paragraph 154, that probably considerable transfers from dry to wet will have to be effected at settlement; and as the lands concerned at present pay only a water-rate of Rs. 2-10-0 per acre for irrigation for paddy, the consolidated assessment on the same is sure to exceed the dry rate plus this amount. This may certainly be reckoned as not likely to amount to less than Rs. 8,447, which would raise the estimated increase to one lakh of rupees for the four taluks as under :—

Four Taluks.

Probable increase including second crop, &c. —

	Rs.
Proposed increase on dry	6,860
Do. do. on wet for one crop only	73,887
Estimated further increase for double-crop assessment	10,806
Do. increase from revision of irrigated area	8,447
Total ...	1,00,000

156. *Assessment of remaining five Taluks.*—The dry and wet assessment and average rate per acre for the five taluks to which it is contemplated to extend the proposals now submitted are detailed in the following statement :—

Taluks.	Wet.			Dry.		
	Revenue Area.	Assessment.	Rate per Acre.	Revenue Area.	Assessment.	Rate per Acre.
	Acres.	Rs.	Rs. A. P.	Acres.	Rs.	Rs. A. P.
Palmanér	7,745	35,896	4 10 2	22,931	27,604	1 3 3
Vellore	13,981	93,352	6 10 10	46,110	82,241	1 12 6
Arcot	36,575	2,19,758	6 0 2	53,236	82,044	1 8 8
Pólúr	23,022	1,18,477	5 3 4	55,375	65,015	1 2 9
Wandiwash	36,025	2,13,822	5 14 11	76,163	1,07,207	1 6 6
Total ..	117,348	681,305	5 12 11	253,815	3,64,111	1 6 11

157. The dry rates average 1 anna 11 pies more than the like rates for the four taluks—*vide* paragraph 137. It seems likely that the application of the proposals will occasion some reduction in the present dry rates; for the Vellore and Arcot Taluks bear a high average rate at present, and the probability of an enhancement in respect to Palmanér, Pólúr, or Wandiwash appears slight. Whether the present rates are in any way burdensome can only be concluded after a further average rate on the survey area may be struck for each taluk. It is the same for wet; only a second element of uncertainty exists, and is likely to affect the average wet rates enumerated in the foregoing statement, viz., the rate being an average consolidated assessment throughout the last four of the taluks specified.

Paragraph 4.

At settlement the area irrigated for double crop will be defined and so charged, and the area not so irrigated as a rule will be rated as single crop only. The result may be anticipated to enhance the assessment on the former, or double crop, and on the whole possibly to diminish that of the lands to be classed hereafter as single crop. Any considerable disparity by survey, either a decrease or increase of area, would tend to a very similar result by settlement; but there is certainly a greater probability of an increase than decrease. I shall be in a better position to speak on this point when I submit the proposals in respect to the anicut villages of the Arcot

160. *Incidence of the Revision of Assessment on Dry and Wet Lands as regards Villages.*—Particulars in this respect will be found in the annexed statement. The four taluks comprise altogether 593 villages; and in 571 of the villages both dry and wet assessed lands exist, whilst 20 villages are wholly dry, and 2 others are entirely under irrigation :—

Increase or Decrease.	Percentages.	Dry.				
		Number of Villages.	Assessment.		Difference.	Per-centage
			Present.	Proposed.		
1	2	3	4	5	6	7
Increase	Below Rs. 10	119	Rs. 58,918	Rs. 61,870	Rs. 2,952	5
	From „ 10 to 25	114	44,336	52,238	7,902	18
	„ „ 25 to 50	73	25,663	34,833	9,170	36
	„ „ 50 to 75	17	5,860	9,494	3,634	62
	„ „ 75 to 100	3	421	781	360	86
	Upwards of Rs. 100	..	..	..	..	..
	Total ..	326	1,35,198	1,59,216	24,018	18
Decrease	Below Rs. 10	118	65,030	61,676	3,354	5
	From „ 10 to 25	112	54,591	45,289	9,302	17
	„ „ 25 to 50	35	15,036	10,534	4,502	30
	Total ..	265	1,34,657	1,17,499	17,158	13
	Grand Total ..	591	2,69,855	2,76,715	+ 6,860	+ 3

Increase or Decrease.	Percentages.	Wet.				
		Number of Villages.	Assessment.		Difference.	Per-centage.
			Present.	Proposed.		
		8	9	10	11	12
Increase	Below Rs. 10	110	Rs. 92,963	Rs. 98,132	Rs. 5,169	
	From „ 10 to 25	203	1,68,670	1,97,468	28,798	6
	„ „ 25 to 50	151	1,03,760	1,39,310	35,550	17
	„ „ 50 to 75	27	7,895	12,470	4,575	34
	„ „ 75 to 100	8	2,253	4,175	1,922	59
	Upwards of Rs. 100	4	655	1,467	812	85
	Total ..	503	3,76,196	4,53,022	76,826	20
Decrease	Below Rs. 10	48	43,477	41,739	1,738	4
	From „ 10 to 25	18	8,816	7,682	1,134	13
	„ „ 25 to 50	4	203	133	70	34
	Total ..	70	52,496	49,554	2,942	6
	Grand Total ..	573	4,28,692	5,02,576	+ 73,884	+ 17

161. The dry lands concern 591 villages, and for 326 of these the proposals result in an average increase of 18 per cent. or Rs. 24,018; whilst on the other 265 villages the result is a decrease of 13 per cent. or Rs. 17,158. The present assessment of the villages in either case is much the same—close upon Rs. 1,35,000 in round numbers—so that upon one-half of the present assessment by villages there is a reduction by the proposals, and on the other half an increase. On the total there is an increase of Rs. 6,860 or 3 per cent.

162. Of the 573 villages having irrigation, the proposals will increase the assessment of the wet area of 503 villages by 20 per cent. or Rs. 76,826, and reduce that of 70 villages by 6 per cent. or Rs. 2,942; the result for the whole being an increase of 17 per cent. or Rs. 73,884. The decrease applies to about one-eighth of the present wet assessment.

Taluk mentioned at paragraph 14. I am unable at present therefore to foresee that the revision of the other five taluks of the district would lead to more than a nominal increase on the present assessment, aggregating Rs. 10,45,416. With the revision of the wet area, it may, I conjecture, be anticipated that an increase will result by the extension of the proposals as contemplated.

158. *Talukwar comparison of Assessment of Year of Classification with that of Fasli* 1288 (1878-79).—The annexed table institutes a comparison in this respect. Chandragiri, Chittoor, and Gudiyátam were classified before the famine, and Wálajápet subsequently:—

COMPARISON OF AREA IN OCCUPATION.

Taluks.	Fasli.	Dry.		Wet.		Total.	
		Area.	Assessment.	Area.	Assessment.	Area.	Assessment.
		ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
Chandragiri .. .. {	1280 ..	13,068	19,121	4,872	34,652	17,940	53,773
	1288 ..	11,993	16,214	5,573	37,901	17,566	54,115
Difference ..		— 1,075	— 2,907	+ 701	+ 3,249	— 374	+ 342
Chittoor .. .. .. {	1280 ..	57,163	69,556	16,189	1,04,442	73,352	1,73,998
	1288 ..	45,447	58,160	16,387	1,06,394	61,834	1,64,554
Difference ..		— 11,716	— 11,396	+ 198	+ 1,952	— 11,518	— 9,444
Gudiyátam .. .. {	1282 ..	66,648	99,607	17,124	1,13,990	83,772	2,13,597
	1288 ..	60,436	92,335	18,904	1,14,977	79,340	2,07,312
Difference ..		— 6,212	— 7,272	+ 1,780	+ 987	— 4,432	— 6,285
Wálajápet .. .. {	1287 ..	70,501	84,522	47,968	2,33,424	1,18,469	3,17,946
	1288 ..	70,192	84,019	46,473	2,26,732	1,16,665	3,10,751
Difference ..		— 309	— 503	— 1,495	— 6,692	— 1,804	— 7,195
Total .. .. .. {		2,07,380	2,72,806	86,153	4,86,508	2,93,533	7,59,314
		1,88,068	2,50,728	87,337	4,86,004	2,75,405	7,36,732
Difference ..		— 19,312	— 22,078	+ 1,184	— 504	— 18,128	— 22,582

159. The occupation of Fasli 1288 (1878-79) was thus less than at the time of classification or rather of the year upon the accounts of which the identification and registration of holdings was then conducted by 18,128 acres of wet and dry, and Rs. 22,582 of assessment. In Wálajápet the falling off between 1877-78 and 1878-79 was 1,804 acres and Rs. 7,195, almost exclusively wet assessed land. In the other three taluks whilst an increase of 2,679 acres, assessed at Rs. 6,188, accrued on the wet area, dry land, amounting to 19,003 acres and bearing an assessment of Rs. 21,575, was relinquished; and doubtless much of this diminution in the dry area needs to be ascribed to land thrown up during the famine years, and not since reoccupied. The relinquishment of dry land is most extensive in Chittoor. Throughout all the three taluks it may fairly be surmised that the dry land thus parted with is of ordinary or indifferent quality, the assessment on which will be ameliorated by the present proposals; and therefore that some portion of the proposed decrease on dry land is merely nominal the land no longer being in occupation. Probably the introduction may eventuate in a slightly higher percentage of increase for dry land than that now shown, should the lands meanwhile continued unoccupied.

163. This comparison is extended to the different taluks in the subjoined table as regard both dry and wet:—

Taluks.	Particulars.	Villages.	Assessment. Present.	Assessment. Proposed.	Difference.	Percentage.
			RS.	RS.	RS.	
			Dry.			
Chandragiri .. .. {	+	32	9,777	11,422	1,645	17
	−	21	7,931	7,332	599	8
Total ..		53	17,708	18,754	+ 1,046	+ 6
Chittoor .. .. {	+	90	41,805	51,760	9,955	24
	−	45	26,911	23,701	3,210	12
Total ..		135	68,716	75,461	+ 6,745	+ 10
Gudiyátam .. .. {	+	82	37,503	42,576	5,073	14
	−	91	61,387	52,688	8,699	14
Total ..		173	98,890	95,264	— 3,626	— 4
Wálajápet .. .. {	+	122	46,113	53,458	7,345	16
	−	108	38,428	33,778	4,650	12
Total ..		230	84,541	87,236	+ 2,695	+ 3
			Wet.			
Chandragiri .. .. {	+	46	24,820	32,380	7,560	30
	−	2	1,449	1,381	68	5
Total ..		48	26,269	33,761	+ 7,492	+ 29
Chittoor .. .. {	+	127	80,222	99,532	19,310	24
	−	7	3,928	3,745	183	5
Total ..		134	84,150	1,03,277	+ 19,127	+ 23
Gudiyátam .. .. {	+	131	79,045	90,556	11,511	15
	−	31	17,535	16,430	1,105	6
Total ..		162	96,580	1,06,986	+ 10,406	+ 11
Wálajápet .. .. {	+	199	1,92,109	2,30,554	38,445	20
	−	30	29,584	27,998	1,586	5
Total ..		229	2,21,693	2,58,552	+ 36,859	+ 17

164. For dry, more than half the villages of Gudiyátam, nearly half of those of Wálajápet, more than one-third of those of Chandragiri, and just one-third of those of Chittoor will obtain a reduction of assessment by these proposals. The decrease therefore is well distributed amongst the several taluks. For wet, the reduction is almost exclusively confined to villages of the Gudiyátam and Wálajápet Taluks, and the amount is very moderate. These details will enable the probable effect of the scheme as submitted to be more clearly understood, more especially when viewed in conjunction with the next statement.

165. *Comparison of Present and Proposed Assessment as regards each Money-rate.*—The following enumerates this comparison for the dry and wet rates separately, and further elucidates the incidence of the present proposals:—

Primary Taram.	Rate.	Area in Occupation. Survey Area.	Revenue Assessment.	Proposed Assessment.	Difference.	Percentage.
	Rs. A. P.	Acres.	Rs.	Rs.	Rs.	
			Dry.			
1	3 8 0	263	388	918	+ 530	+ 137
2	3 0 0	2,614	3,801	7,844	+ 4,043	+ 106
3	2 8 0	2,162	2,519	5,407	+ 2,888	+ 115
4	3 0 0	578	1,156	1,735	+ 579	+ 50
5	2 4 0	5,997	11,043	13,494	+ 2,451	+ 22
6	1 12 0	28,283	44,495	49,494	+ 4,999	+ 11
7	1 6 0	57,713	74,521	79,356	+ 4,835	+ 6
8	1 0 0	68,778	72,233	68,778	— 3,455	— 5
9	0 12 0	51,619	44,449	38,714	— 5,735	— 13
10	0 8 0	20,604	14,262	10,302	— 3,960	— 28
11	0 6 0	1,797	988	673	— 315	— 32
Total ..	..	240,408	2,69,855	2,76,715	+ 6,860	+ 3
			Wet.			
1	8 0 0	221	1,189	1,770	+ 581	+ 49
2	7 8 0	1,853	10,504	13,893	+ 3,389	+ 32
3	7 0 0	1,912	10,310	13,383	+ 3,073	+ 30
4	6 8 0	12,375	66,210	80,445	+ 14,235	+ 22
5	6 0 0	9,436	45,117	56,612	+ 11,495	+ 25
6	5 8 0	19,037	92,061	1,04,706	+ 12,645	+ 14
7	5 4 0	4,553	19,275	23,904	+ 4,629	+ 24
8	5 0 0	9,386	40,005	46,928	+ 6,923	+ 17
9	4 12 0	13,389	57,484	63,601	+ 6,117	+ 11
10	4 8 0	4,044	14,829	18,199	+ 3,370	+ 23
11	4 4 0	7,062	26,615	30,009	+ 3,394	+ 13
12	4 0 0	6,146	22,564	24,585	+ 2,021	+ 9
13	3 12 0	2,082	6,569	7,806	+ 1,237	+ 29
14	3 8 0	2,010	6,130	7,037	+ 907	+ 15
15	3 4 0	1,295	4,127	4,207	+ 80	+ 2
16	3 0 0	1,318	3,835	3,954	+ 119	+ 3
17	2 8 0	687	1,746	1,469	— 277	— 16
18	2 0 0	31	122	68	— 54	— 44
Total ..	..	96,780	4,28,692	5,02,576	+ 73,884	+ 17
Grand Total..	..	337,148	6,98,547	7,79,291	+ 80,744	+ 12

166. Primary tarams 1 to 3 in dry relate to lands exceptionally treated on account of the facility with which water can be secured; and though the enhancement exceeds cent. per cent., there can be no question as to the propriety of thus treating and rating these lands which are invariably double crop and sometimes two crops of paddy. Ordinary dry lands, tarams 4 to 11, vary from + 50 to — 32 per cent.; and it should be noticed that tarams 4 to 7 occasion an increase, and tarams 8 to 11 a decrease; and that the increase in one case and the decrease in the other is marked by singular regularity of progression. The increase appertains wholly to the better quality of soils, being most for the lands rated in the highest taram 4; and the decrease is distributed over the medium and poorer qualities of soil and is largest for the very poorest soil, taram 11. In wet there is an increase greater or less under each taram, save the two last, 17 and 18, which exhibit a decrease. The heaviest enhancement is mostly on the higher tarams, but the percentage varies greatly for the medium and lower tarams, and any particular uniformity in this respect could not be expected.

167. In reviewing these proposals, I request that the circumstances under which the present assessment had their origin, some 75 years ago, and have since been modified, may be borne in mind. In 1829, Mr. Nisbet "pronounced the pymaish rates to be most unequal," and down to 1854, when Mr. Bourdillon submitted his report for a general reduction of the rates of assessment, pending a regular survey and assessment being undertaken, the inequalities of the then prevailing assessment would appear to have been acknowledged by the Collectors. Mr. Bourdillon's scheme of reduction—a measure eminently beneficial to the district—was a temporary expedient that has now had force for three and twenty years. The manner in which given effect to is explained at paragraphs 6 to 8, and though altering the incidence of the assessment materially, especially on the more highly-rated lands, and thus decreasing the inequalities in some measure, it tended to enhance the same in a greater degree on the more leniently rated lands, and consequently remarkable unevenness in the present assessment is met with in many villages, the full extent of which is rarely realized save by a settlement officer whose avocation takes him day by day to

different villages, and acquaints with the real incidence of the assessment. The variation by survey has tended in some measure to still further reduce inconsistencies of assessment, and sometimes to give greater prominence to the same. The reductions of 1857 seemingly applied to all villages indiscriminately—a village with high rates of assessment securing a greater abatement than one with moderate and low rates. Hence it is that, whilst many villages are still rated excessively, others are extraordinarily lowly assessed. It may, I think, be further considered by the light thrown upon the existing assessments by the statement at paragraph 165, that upon the lower class of dry soil the reduction of 1857 was inadequate. It left the inferior soils unduly burdened when compared with those of higher productive power.

168. The present scheme has been framed, as intended by the original constitution of the settlement, to redress these admitted inconsistencies in the present land assessment, the non-recognition of which would tend to frustrate the main object of the revision now being undertaken, and I would fain hope that my proposals may be accepted as satisfactorily attaining this purpose.

169. *Anicut Irrigated Villages.*—These exist principally in the Wálajápet Taluk. Nominally 74 villages are now returned in the revenue accounts as irrigated under the Palar anicut in that taluk, but examination has shown the number to be really 62 villages, as 12 of those so returned do not receive any anicut supply in respect to the registered wet land of the villages. In some there is a slight area under water-rate from anicut irrigation, but the real sources of supply of the villages are unconnected with the anicut. In the 62 villages thus regarded as anicut supplied by these proposals, only some of the sources of irrigation are so fed. Under the Ponna anicut 58 villages were found to be irrigated in the same taluk, and in these villages likewise the anicut supply does not extend to all the sources. The method of classing the sources of irrigation, both anicut supplied and the more ordinary rain-fed, is fully explained at paragraph 49. Particulars of the classing adopted for the anicut villages of Wálajápet, under both the Palar and Ponna anicuts, are afforded in the following statement, the anicut and other irrigation being separately enumerated:—

Details of Irrigation.	Class.	Palar Anicut, 62 Villages. Tanks.	Weirs.	River Channels.	Spring Channels.	Drainage.	Total.	Ponna Anicut, 58 Villages. Tanks.	Weirs.	River Channels.	Spring Channels.	Drainage.	Total.
Anicut	1	43	5	3	5	..	56	14	1	3	..	..	18
	2	48	2	4	2	1	57	60	3	10	..	2	77
	3	2	..	..	..	..	2	3	..	1	..	..	4
	4	..	1	..	..	..	1	..	..	..	..	..	..
Total ..		93	8	7	7	1	116	77	4	14	2	2	99
Non-Anicut	1	..	..	..	..	..	..	..	..	..	..	..	..
	2	3	1	..	..	..	4	2	..	..	..	..	2
	3	5	..	2	7	..	13	19	..	..	1	..	3
	4	11	..	..	1	3	9	14	1	..	3	1	23
Total ..		19	1	2	8	3	33	35	1	..	4	3	43

170. Under the Palar anicut 56 sources are rated in the first class, 57 in the second, 2 in the third, and 1 in the fourth. The latter is a nominal entry, as the source is ineffective at present and probably will need to be removed at settlement. Under the Ponna anicut there are only 18 first class sources, no less than 77 being in the second class, whilst 4 others are third class. Most of the tanks under the latter anicut are indirectly fed, and do not, as a rule, receive any supply until late in the season. The cause for river and spring channels being included under anicut irrigation is explained at paragraph 57.

171. The foregoing irrigation from the Ponna anicut depends on the main channel taking off from the left bank of the river. A smaller channel takes off on the right bank and irrigates six villages in Chittoor Taluk and seven in Gudiyátam, the number of sources supplied being eighteen and fourteen respectively. These are rated in the first class.

172. *State of Irrigation Works.*—By arrangement with the Collector, reports have been submitted to him as to repairs and other work required to the several sources of irrigation inspected by the Assistant Director or by myself for the purpose of classing the same whilst engaged in the examination of villages of the several taluks. The operation has extended as yet only to the Chandragiri, Chittoor, and Wálajápet Taluks. The latter has been fully reported on, but the inspection of some villages in the two taluks first named has been deferred, and consequently further reports have yet to be made to complete these taluks.

173. Notwithstanding the expenditure from Famine funds during later years, many of the more ordinary tanks, especially in the Wálajápet Taluk, are more or less in a very dilapidated condition and have not seemingly had any expenditure incurred on them for years. The larger and more important tanks are generally in moderate order, but more attention is requisite to the maintenance of the ordinary rain-fed tanks and several of those included as either Palar or Ponna anicut fed. The projected improvement of the irrigation on the northern or left bank of the Palar, reported on during the famine by Mr. J. W. Rundall, will be a great boon to many of the so-called anicut villages which at present have their supply supplemented more or less precariously in some cases from the anicut irrigation. I have been unable to ascertain as yet from the Department of Public Works the villages or sources likely to be benefited by the project when it may be practicable to continue and complete the scheme. The irrigation from the Ponna anicut, probably the most effective of the two, similarly needs to be systematized, as a few large tanks into which the channels first discharge monopolized the whole of any small supply the channel may convey when the river is not in flood, and water is only passed to the numerous tanks below after the said large tanks may have nearly filled. In fact, the tanks below rarely receive any supply until the burst of the north-east monsoon. This explains why so few tanks under the Ponna anicut are graded in the first class. If the irrigation from these anicuts is improved and better distributed, some of the sources at present rated as second class could be raised to first class. The instructions of Government, reserving the right of modifying the wet rates of assessment to a higher class in such cases, when the irrigation may be improved subsequent to settlement, will have due attention at the introduction.

G. O., No. 2,095, dated 25th June 1877.

174. An abstract of the number of villages and sources for which reports were submitted to the Collector is furnished below, specifying the number of sources reported for repair and for removal from the present list of sources according to the Revenue accounts :—

Taluks.	Number of Villages reported on.	Reported for Repairs.							Reported for removal from list of Sources.						
		Government				Dasabandham			Government				Dasabandham		
		Tanks.	River Channels.	Spring Channels.	Weirs.	Tanks.	River Channels.	Spring Channels.	Tanks.	River Channels.	Spring Channels.	Weirs.	Tanks.	River Channels.	Spring Channels.
Chandragiri	26	33	8	5	..	21	1	..	1	4	2	..	..	1	..
Chittoor	52	53	18	2	..	62	3	1	12	2	..	..	11	1	2
Wálajápet	192	253	4	9	5	3	..	..	21	..	1	1	..	..	..
Total ..	270	339	30	16	5	86	4	1	34	6	3	1	11	2	2

175. The reports furnished relate to 270 villages and detail 390 Government and 91 Dasabandham sources for repair, and 44 Government and 15 Dasabandham sources for omission as separate sources for the future. In both respects the proposals are now under consideration, and to some extent have already been replied to. Small tanks and other sources ruined since many years are still retained in the accounts, and, so far as the Revenue Officers concur, these will be removed at settlement, and the area will be adjusted to dry or registered under the sources from which supplied, if otherwise irrigated. Similarly, small ponds, on which it is undésirable any outlay for repairs should be incurred, are now registered as the sources of irrigation for lands mainly deriving their supply from ordinary tanks and channels. These in like manner will be omitted, and the area registered under the source from which the lands may be mainly fed.

176. *Dasabandham Tanks.*—As I examined almost all the Chandragiri and Chittoor villages to which the Dasabandham sources referred to may appertain, and found no occasion to report at all in respect to several villages, I am in a position to record my opinion that the bulk of the Dasabandham sources are fairly maintained; they are usually on a par with the Government sources. Altogether there are 435 Dasabandham sources in the two taluks in question, and the proportion likely to be reported for attention will probably be about one-fourth. I observed repairs to be mostly required in cases where the Dassbandham might pertain to several shareholders. I consider that the system might be extended to many of the petty sources of irrigation with advantage to the State.

177. *Past outlay on Irrigation Repairs.*—It appears from the District Manual that the expenditure on irrigation works, exclusive of the cost of establishment, amounted to Rs. 14,86,751 during the ten years marginally enumerated, including the heavy expenditure during the famine, or an average of Rs. 1,48,675 annually. The assessment on irrigated land during Fasli 1288 (1878-79), including the charge for water-rate and second crop, aggregated Rs. 13,24,034. Now that the supervision of repairs by the Public Works Department has been withdrawn from several taluks of the district, other arrangements are requisite for the due maintenance of the numerous works of irrigation in which the Government are so largely interested. A fixed assignment of the irrigation assessment of the works excluded from the control of the professional department would certainly best provide for the upkeep of the large number of sources of irrigation requiring attention.

Year.	Expenditure on Irrigation.
	Rs.
1869-70	91,664
1870-71	1,24,130
1871-72	70,978
1872-73	1,36,419
1873-74	1,60,518
1874-75	1,81,426
1875-76	3,39,773
1876-77	1,68,623
1877-78	1,97,317
1878-79	15,903
Total ..	14,86,751

178. *Proposals to apply previously sanctioned Schemes or Table of Money-rates to Districts to be newly settled without the submission of any fresh Scheme.*—This proposal, which was considered in the note by Mr. Wilson, the late Director, printed with Board's Proceedings, No. 2,473, of 28th August 1879, was left to be dealt with when the North Arcot scheme might be placed before the Board. The suggestion might perhaps be acted on without any very great deviation from the principles upon which the resettlement of the land assessment is conducted in some cases, but not generally. For instance, the present proposals embrace a large portion of the original southern division of Arcot, paimaished formerly under that district, viz., the Vellore, Arcot, Polur, and Wandiwash Taluks. Should the proposals prove suitable to the circumstances of those taluks, and moreover should the average of prices during the prescribed twenty years on which the settlement commutation rate is based, approximate at all closely to the rates adopted for North Arcot, then the scheme now rendered might, under these circumstances, be regarded as appropriate and extended to the South Arcot District also. Time will show this, when the taluks named are dealt with. If the average prices ruling in South Arcot vary in any marked degree from those now recommended for this district, the present scheme should certainly be regarded as unsuited to South Arcot. The commutation rate is the chief factor in any scheme of settlement, and this was prominently recognized in the discussion on the Salem and and Tinnevelly Settlements. The suggestion appears practicable of adoption only in respect to districts in which there may be equality in respect to the prices of grain and which may otherwise be regarded as very similarly circumstanced, which rarely happens.

179. If the sanctioned schemes already existing are likely to suffice for the requirements of districts to be hereafter settled, then it is only reasonable to conclude that one or other of the schemes would prove suitable to North Arcot. Having now had many years' experience of this district, I am convinced that none of the previously-sanctioned schemes could be so adopted. In fact, only two could possibly be considered for the purpose—the Chingleput and Coimbatore schemes—for all others are wholly inapplicable or vary in respect to the standard classification table as regards the number of sorts under each class of soil. The two schemes cited require to be rejected for the purpose, because (1) the commutation prices come out much lower, and (2) the grain values or produce of wet land have been determined to rule very much higher in North Arcot. There may be uniformity between portions of the present scheme and other schemes, but regarded as a whole very considerable variation exists.

180. The change would, as Mr. Wilson points out, lead to the adoption, not of any existing or sanctioned scale in its entirety, but of an arbitrary scale or table of rates similar to that furnished with the communication referred to. Working to such a table, classification would be apt to degenerate into a mere adjustment of the present assessments, conducted more with reference to what the land may at present be paying, than the recognized value or quality of the soil. The usual course, as in the settlement of this district, is for the rates proposed to be determined upon the results of the classification ; applying the commutation rate to the grain values as estimated for the several classes and qualities of soil, the classification proceeding mainly upon the quality that many years' experience may indicate as assignable to each kind of soil dealt with, modified in some measure in the case of irrigated lands by the level or facility of the supply of irrigation. By this means relative uniformity between one village and another is secured ; and with the classification blocked out it can be readily ascertained from the villagers in most cases, whether the treatment of the village is in consonance with their experience and views. This information is usually afforded with but little reticence, and is of much value.

181. Until a sufficient portion of a district has been classified, the circumstances of the irrigation may be known, and the actual assessment upon the survey area worked out, and as well the other settlement calculations made, it is hardly possible to determine with any degree of certainty or utility what the assessment might appropriately be. In Mr. Wilson's note he remarked "that a wet scale having for its highest limit Rs. 10 would not satisfy the requirements of the best lands under the Palar and Ponna anicuts in North Arcot * * * which are quite as able to bear rates of Rs. 12 and 10-8-0 as the Bhavání channel lands of Coimbatore and the Támbraparni valley of Tinnevelly." With the light which the details of the scheme of settlement afford on the subject, it will be seen that the commutation price for North Arcot for paddy, Rs. 95, is just three-fourths of that of Coimbatore, Rs. 126; and that in place of the highest rate for the anicut irrigation of North Arcot being above Rs. 10 per acre, it is less or Rs. 8; and that whilst very little area falls under this rate, it enhances the present assessment by 49 per cent. It would be impolitic, in my opinion, to fix any higher rate under the circumstances.

Statement at paragraph 165.

182. But few districts remain to be newly taken up for settlement—South Arcot, Madura, and Bellary—and it would seem unwise to so far alter the basis of the settlement for these districts as the proposition made and now awaiting consideration would appear to contemplate. Any settlement effected on an arbitrary or discretionary table of rates based on the experience of other settlements, and not on a separate scheme founded on the commutation rate and general characteristics of the district concerned, would eventually, at the termination of the first period of settlement, lead to difficulties and complications; for it would not be possible to revise the same in conformity with any modification of the commutation price for a fresh series of years, and probably a further discretionary element would have to be imported into the revision of the settlement.

183. *Composition for Second Crop at Settlement.*—In dealing with second crop at the introduction of settlement, in conformity with G.O., No. 880, dated the 14th July 1874, I would request that composition for a second crop on wet land may be sanctioned for this district at the same rates as for Cuddapah, viz, one-third, one-fourth, and one-fifth of the single crop assessment. Under many of the minor and precariously fed sources of irrigation of this district, a crop of ragi is first raised, more or less with the aid of wells, without which two crops would not be possible. Very often the wells are also the means of securing the paddy crop which follows I should prefer to be able to treat such lands where requisite with the same liberality as allowed for the Cuddapah District.

184. *Future charge for Water-rate.*—With introduction of the revised assessment and the displacement of the cawny, the present unit of measurement, by the acre, I would suggest that the special water-rate of Rs. 3-8-0 per cawny, now uniform throughout the district, should be rescinded, and that the charge should conform with that prevailing in the neighbouring settled districts and detailed in Board's Standing Order No. 5.

185. *Lifted Irrigation.*—The area of lifted irrigation is unimportant, but it is proposed to allow the usual abatement of one rupee per acre.

186. *Increase of Assessment to be levied by increments.*—I would request that the course adopted in the recent settlements of other district in this respect may be approved for North Arcot.

187. *Measurement of minor holdings of Survey Fields.*—The necessity for this measure is explained at paragraph 25, and in conformity with representations made the operation has been undertaken in Wálajápet, and the greater portion of the taluk has been completed as an experiment. It is feared, however, that the reduced allotment of the department will not admit of the operation being extended and continued in other taluks. The omission of this essential detail, in a district where the revenue and survey areas are so diverse, would inevitably occasion considerable dissatisfaction among the occupants of land, and be likely to mar much of the good effect that may otherwise be anticipated from the survey and settlement of the district. There would, too, be good grounds for the dissatisfaction; for where an increase accrued there would be no certainty that it was properly so charged, and it would be quite possible for a ryot entitled to a decrease to have his assessment enhanced. I hope, therefore, it may be feasible to arrange for so necessary a measure being generally undertaken throughout the district so as to render the survey fully effective. It was always intended that these minor holdings should be separately measured, and the maximum for clubbing in dry was extended to 12 acres in this district on this consideration.

188. In conclusion, I regret the length to which this report, which I contemplated being brief, has extended. This necessity for fully explaining the proposals, and the importance of the many questions referred to, may, I trust, be recognized.

Enclosure No. 2.—Appendix.

The settlement proposed for North Arcot is based on the usual processes worked out for four of the nine taluks of the district, but the information given is amply sufficient to arrive at conclusions for the whole, and the Board support the request that the rates recommended by the First Member in charge of Settlement, when sanctioned, may be applied throughout the district generally, without any further proposals. A similar arrangement was sanctioned in G.O., No. 1,779, dated 22nd May 1877, for the Tinnevelly District, thus expediting the settlement by perhaps two years and cheapening the cost by about a lakh of rupees. In the present instance, moreover, further proposals are even less needed than they were when the Tinnevelly District was settled, as the Board propose, with the permission of Government, to adopt in this and all future settlements a standard table of rates to the exclusion of such further experiments in the yield of soils, cultivation expenses, &c., as have been repeated for various tracts now upwards of twenty times. It will be advantageous, however, to work out a commutation price for each district as usual, as having this to compare with will render a revision of assessment thirty years hence a mere matter of account, and so obviate the necessity of revisiting the lands of a district; there are but three districts more to settle, and in two of these—South Arcot and Madura—a commutation price has already been worked out for a single taluk by the Settlement Department, so Bellary alone remains, and determining a commutation price for this district and modifying what has been partly worked out for South Arcot and Madura will not involve very much labor.

Chidambaram, in South Arcot.
Melúr, in Madura.

2. North Arcot is stated to export a considerable surplus of grain, and the district is undoubtedly prosperous, the present assessment having been framed to meet the circumstances of the years immediately preceding 1857, when the market was greatly depressed. The highest single-crop rate of assessment now known in the district is but Rs. 7-8-0 an acre, while the soils to which this maximum rate is applied are found to yield a ton and a half or about half a garce of paddy per acre. For such soils Rs. 7-8-0 seems to be hardly appropriate as the half garce sells at present for Rs. 100 and is valued by the Settlement Department at Rs. 50 in framing the average rate which it is thought safe to adopt throughout a thirty-years' settlement; this yield is for the first crop only; a second crop on the same land yields usually at least half and often as much as the first crop and pays half assessment additional.

3. The assessment of 1805 was much higher than that now existing, for the dry rates have since been reduced by 12½ and 15 per cent. in 1821 and 1857, respectively, while the wet rates were reduced by 12½ and 30 per cent. in those years. All authorities on the subject agree that the present maximum wet rate may be raised, and were it not for the very considerable increase of individual taxation that would ensue there is no apparent reason why North Arcot should not bear a maximum wet rate of Rs. 12 an acre as Tinnevelly does, seeing that the maximum grain values adopted in either district are almost identical and the commutation rate now proposed for North Arcot is but 5 per cent. less than that sanctioned for Tinnevelly. Mr. Rundall, however, proposes Rs. 8 as a maximum for North Arcot; his scale when applied to the Curnam's areas of wet land maintains the present revenue, but raises it by 12 per cent. when applied to the survey areas.

4. The incidence of Mr. Rundall's scheme for wet and dry land, respectively, raises the single-crop assessment of the former by 17 per cent. and that of the latter by 3 per cent., or by Rs. 73,884 and Rs. 6,859—total Rs. 80,743 in the four taluks reported on; with this added the assessment would be still much below the reduced assessment of the period between 1821 and 1857. Assuming, however, that the rates now proposed are sufficiently high for dry land as they correspond very closely with those introduced in other settled districts, the Board still think that the rates for wet land will admit of being raised, and the mode in which this may be done will be dealt with further on.

5. It seems to be needless to review in detail the processes by which Mr. Rundall's rates are arrived at, as this has already been done by the First Member of the Board now in charge of the Settlement. Suffice it to say that numerous experiments were made in harvesting crops whereby the yield of paddy was found to *average* upwards of a ton per acre or 1,493 lb. of cleaned rice. To convert this grain into money Mr. Rundall proposes a commutation price of Rs. 95 per garce of 7,360 lb. or 3¼ tons of paddy. Mr. Puckle, for reasons given in paragraph 16 of his letter, would raise this to Rs. 100 and apply it to a slightly increased grain value for paddy; this small change admits of the maximum acreage charge being raised to Rs. 9. The yield of dry grains on 400,000 acres, the approximate area of dry land cultivation in the district, varies from one-half to one-seventh of a ton per acre, average say one-third of a ton, and on much of this area a second crop is grown though it is not taken into account in any of the settlement processes; it may, however, be taken as a set-off against the cotton, indigo, and oil-seeds largely grown in the dry lands, and as securing to the people a yield of 746 lb. per acre on the entire dry area.

6. In Proceedings, No. 2,473, dated 28th August 1879, the Board undertook to review Mr. Wilson's proposal to adopt a standard table of rates applicable in whole or in part to the districts that have yet to be settled. This table is given in the enclosure of the Proceedings referred to and again in paragraph 8 of Mr. Puckle's letter submitting this schema for North Arcot. To illustrate the amount of labor that may be saved by such a table it is sufficient to mention that no less than 6,000 experiments have been made by reaping crops in the Godivari, Tinnevelly, Coimbatore, and North Arcot Districts and in parts of Kurnool and Cuddapah to arrive at the same maximum grain valuation, viz., 2,760 lb. per acre for paddy, while the maxima adopted in Ganjam, Chingleput, Nellore, and South Arcot, and which necessitated another 6,000 experiments, differ from each other by a few pounds only. The maximum expenses allowed for cultivating an acre of rice-land are almost identical in South Arcot, Trichinopoly, Masulipatam, and Ganjam, and differ but little from each other in Cuddapah and Kurnool; while, merging fractions, every rate of assessment that has yet been proposed is embodied in the proposed table, which works out a scale of assessment ranging from Rs. 12 to 4 annas an acre graded by a system of grouping that provides for the highest rate of a lower group being identical with the second rate of the group preceding it and so admits of the number of groups being extended above or below those shown in the table when needed. The difference between the seven fourth-group rates in this table and the seven first-group rates proposed by Mr. Rundall as applicable to the best wet lands of North Arcot is but 8 annas, and the total difference of assessment on the land to which the three rates which differ apply is but Rs. 180, so that virtually years have been spent in arriving at results for which sufficiently close averages had been already attained. In this instance, however, Mr. Rundall had no alternative but to work out his scheme as usual, for the Board's review of the proposed standard table was purposely deferred, pending the receipt of independent data wherewith to test its applicability to a specimen district, and this is now done for North Arcot.

	LB.
Ganjam	1,840
Chingleput	1,932
Nellore	1,955
South Arcot	1,932

	RS.	A.	P.
South Arcot	7	8	0
Trichinopoly	7	8	0
Masulipatam	7	2	9
Ganjam	7	10	3

Seven Fourth-group Rates of Mr. Wilson's Table.			Seven First-group Rates proposed by Mr. Rundall.			Difference.		
RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
8	0	0	8	0	0	...		
7	0	0	7	0	0	...		
6	0	0	6	0	0	...		
5	0	0	5	4	0	...		
4	8	0	4	8	0	...		
4	0	0	3	12	0	...		
3	8	0	3	0	0	...		
38	0	0	37	8	0	0	8	0

7. Commencing with the fourth group of Mr. Wilson's table and applying the rates of this and the three following groups to the wet lands of the four taluks reported on gives an assessment of Rs. 33,489 below that proposed by Mr. Rundall; the cause of this divergence is shown by a glance at paragraph 25 of Mr. Puckle's letter, the difference allowed by Mr. Rundall between his groups being but half a rupee instead of one rupee as in Mr. Wilson's table. A difference of half a rupee in each group, or 19 per cent. between the first and last groups, is not sufficient to meet the wide distinction that undoubtedly exists between the best river irrigation and that of the poorest rain-fed tank in the district, and the Board prefer the more liberal scale of Mr. Wilson's table, which allows of a difference of 33 per cent. in the assessment of the same description of land under the best and worst irrigation.

8. As explained above, however, an 8-rupee rate as a maximum is too low for North Arcot, and Mr. Puckle's proposal to commence with a 9-rupee rate (third group of Mr. Wilson's table) or one group higher than Mr. Rundall's scheme, adopting the rates exhibited in the third, fourth, and fifth groups of Mr. Wilson's table, with a sixth group added, seems preferable; this would raise the assessment on Mr. Rundall's classified area by Rs. 33,868.

9. The adoption of Mr. Wilson's table in North Arcot will not affect the existing *system* of settlement as the grain value of the lands, the price at which this grain should be converted into money, and the net value of the crop have all been determined without reference to this table; but if the use of this table is extended to Bellary, South Arcot, and Madura, districts that yet remain to be dealt with, it will be unnecessary to repeat all the processes mentioned above, as the one aim and object of using the table is to save the repetition of labor that seems to be no longer required.

10. The present assessment of the 96,203 acres of wet land found in the four taluks reported on is Rs. 4,26,852. Mr. Rundall proposes to raise this to Rs. 5,00,986 while the adoption of the alternative scheme would raise it to Rs. 5,39,854, or by 26 per cent. above the present assessment; as a set-off against this there is 11 per cent. of increase by survey to be charged for, and net increase of 15 per cent. on the irrigated area cannot be deemed excessive seeing that the assessment of the lands in question has been reduced by 42½ per cent. at various periods since the commencement of British rule, while market prices are now far higher than they were when the reductions were made, and the commutation rate on which the assessment is calculated is the average of twenty years ending with 1865, when prices were at a level to which, with the present facilities for communication, they can never again fall.

11. Mr. Puckle mentions in paragraph 30 of his letter that there will be much adjustment of figures on hearing appeals and by transfers from dry to wet and from wet to dry and the usual abatement of 1 rupee an acre for lift will have to be made at the settlement; this will tend, of course, to somewhat reduce the amount of assessment proposed.

12. As regards second crop, it will be sufficient to charge half additional to the single-crop rate on large tracts of unfailing double crop land under superior sources of supply, compounding the charge on the area under inferior sources at one-third, one-fourth, or one-fifth, according to circumstances, and this will be undoubtedly favorable to the ryots, as at present the second crop is charged at a uniform rate of half assessment additional; at settlement the rates of compounding will be fixed on blocks and not on individual fields.

13. The officer making the settlement should, in communication with the Collector, allot waste lands for grazing where required by the villagers.

14. The levy of any considerable increase of assessment from individuals may be made by increments of 2 or 4 annas in the rupee, thus granting the ryot eight or four years, according to circumstances, before the full amount of the additional charge is levied from him. In North Arcot there is likely to be a considerable increase of assessment, and the hardship to individuals will be modified if this system is allowed to continue.

15. The well-lands noted in paragraph 12 of Mr. Puckle's letter should be treated as dry.

16. Provision is made for the introduction of a third group for dry lands if needed; it will rest with the officer making the settlement to avail himself of this provision should he meet with any villages exceptionally circumstanced.

17. When the settlement is made the charge for water to dry lands should be the same as that laid down in Board's Standing Order No. 5.

(True Copies and Extract.)

Secretary.

To the Secretary to Government, Revenue Department, - 20
with one original enclosure in G. R. No. 6,045
of 1880 (Appendix A) to be returned, and copy of
Board's Proceedings, 28th August 1879, No. 2,473.
" the Member of the Board of Revenue in charge of Settlement Department.
" the Collector of North Arcot.

To Copies Shortly

Ex. A. S. Rodgers.

1880.

Board of Revenue,
MADRAS.

To

THE SECRETARY TO GOVT.,
REVENUE DEPARTMENT,
&c., &c., &c.

Dated October 11th.

Printed th.

Received

PROCEEDINGS, 11TH OCTOBER 1880, No. 1,495.

(Copy) Settlement

OCTOBER.

No. 1,195.

Settlement — of North Arcot District. —
Reviewing the scheme for —.

Revenue Department

For Orders. C. No. 6401 A.

Board's Proc. dated 11 October 1880 No. 1495, reviewing the scheme for Settlement of North Arcot District

The points requiring orders in this paper will be succinctly noted below, with references to the paragraphs in Mr. Rundall's report and in the reviews thereon both by Mr. Puckle individually as in charge of the Settlement Department and the Board of Revenue collectively.

(1) Whether the rates now worked out for the four representative Taluks in North Arcot may be applied to the remaining 5 Taluks in the

the District without any further proposals_

Mr. Rundall_ Paras_1,13,153 & 157

Mr. Puckle — Paras_2 & 3

The Board — Para_1.

All the officers are unanimous that this may be done.

(2) Should a standard table of rates be adopted in this and all future settlements to the exclusion of further experiments in the yield of soils, cultivation expenses &c.— a commutation price alone for each of the remaining Districts[×] to be settled being worked out?

Mr. Rundall — 17 & 6 182

" Puckle, 7, 8, 9 & 10.

" — Para 1 (latter part) and 9.

Mr. Rundall urges very strong reasons in condemnation

H. E. [illegible] the District [illegible] the argument [illegible] increase by survey [illegible] for the [illegible] is not [illegible] by adopting [illegible] the old [illegible] acreage into [illegible] basis for [illegible] the [illegible] from it. The [illegible] from the old [illegible] measurement [illegible] inaccurate [illegible]

[×] South Arcot
Madura
Bellary

[illegible] from it are unreliable. [illegible] is the same [illegible] it [illegible] H. E.

Vide Boards Progs. dated 28th August 1879 No. 2443.

[illegible] increase in the [illegible] 3% [illegible] the latter [illegible] raise the [illegible] by 20% [illegible] do [illegible] in all the D[illegible] from this [illegible] I [illegible] the latter [illegible] be carried out on Mr. Rundall's scheme & sanction it [illegible]

of the proposal. It originated with Mr. Puckle himself and found favor with Mr. Wilson the late Director, and is now upheld by Mr. Puckle and supported by the Board.

(3) Should the interstitial holdings in survey numbers in North Arcot be properly measured before settlement, or should the increase of area by survey in the whole numbers be simply apportioned on paper among the different sub-holdings?

Mr. Rundall Paras 18, 22, 23, 24 and 25.

Mr. Puckle Para 5

Board — " — "

Mr. Rundall is strongly in favor of detailed survey but Mr. Puckle is against it.

The

The Board have not noticed the joint Sist it is an important matter and needs special instructions. The utility of a settlement would be given to question, were this essential part of the work lightly dealt with.

(4) What grain value for wet should be adopted for North Arcot & Dry agreed to by all?

Mr. Rundall 82 to 98

Mr. Puckle, paras 14, 15

Board — para 5

Mr. Puckle has added 50 measures all round to the grain values of rice arrived at by Mr. Rundall, for the different Classes. This is done to raise the money rate for wet one rupee. The Board

approve the addition.

(5) What should be the commutation rate per Garce of paddy in North Arcot

Mr. Rundall paras 66 & 77.

Mr. Puckle para 16, 19

Board para 5.

Mr. Rundall recommends 95 Rs. per Garce of paddy, but Mr. Puckle proposes to raise the rate to Rs. 100. The Board accept the latter figure.

(6) May Mr. Rundall's money rates for wet be raised as proposed by Mr. Puckle and approved by the Board?

Mr. Rundall paras 10 & 11

Mr. Puckle 21 to 25 and

Board 2, 3, 4, 7, 8

Class.	Mr. Rundall.	Mr. Puckle
1	1200	1250
2	1100	1150
3	1000	1050
4	865	915
5	775	825
6	680	730
7	590	640

Rates for each group.

Mr. Rundall's maximum and minimum rates are respectively Rs. 5 and 2 per acre against Rs. 9 and Rs. 2-8 in the alternative scheme proposed by Mr. Puckle & supported by the Board.

(4) Financial Result for the 4 Talukas are as under

Mr. Rundall para 134 to 141 and 155.
Mr. Puckle 29 to 30.
Board para 10.

Net area Acres 96,203 — Rs. 4,26,852 Present Revenue
5,00,986 Mr. Rundall
5,39,854 Alternative scheme

The area held at special rates under ruined tanks and wells is not included in these figures. Vide Mr. Puckle's para 29.

(8) At what rates should the second crop be charged?

Mr. Rundall — paras 155 & 183
Mr. Puckle — para 31
Board — para 12.

Mr. Puckle infers from the figures in paragraph 155 of Mr. Rundall's letter that the latter officer intends charging at half additional to the single crop rates for "all existing permanent double crop" including that under inferior sources also, and therefore remarks that "it will be quite sufficient to charge a half rate on large tracts of unfailing double crop land under first class sources of supply, compounding the area under inferior sources at one-third, one-fourth or one-fifth according to circumstances". Mr. Rundall's para 155 does not clearly shew at what rates

rater be calculated. Mr. 2nd Crop charged, but his para 183 shews that he intended to charge the reduced rates for land under inferior sources in general. The Board support Mr. Puckle, and the benefit is to extend to all 2nd Crop land under inferior sources.

(9) Should any considerable increase of assessment by settlement be levied from individuals by annual increments?

Mr. Randall para 185
Mr. Puckle para 35.
The Board para 14.

Mr. Cox is against the concession, but Mr. Randall

is in favor. Mr. Puckle would abide by such orders as might be passed on the point in connection with the Cuddapah Sub-division scheme, since disposed of by G.O. dated 9th August 1880 No. 939. The point was not specifically noticed in the order. The Board however recommend the concession for North Arcot where the increase of assessment is likely to be considerable.

(10) Should well-lands be treated as wet or dry?

Mr. Randall para 45 & 46.
Mr. Puckle para 12.
The Board para 15

All agree that these lands should be treated as dry, but that the best ones are to be

placed

placed in the "exceptional" area at Rs. 3-8 per acre.

(11) Deduction for Civil.

Mr. Rundall para 185.
Mr. Puckle para 30
The Board para 11

All agree that the usual deduction of one rupee an acre for taking should be made, and the Board remark that this will tend somewhat to reduce the amount of assessment proposed. In calculating the financial results, the probable reduction on this account should have been shown.

(12) Waste land for grazing

Mr. Rundall — "—
Mr. Puckle para 36
The Board — "— 13

Mr. Rundall is silent. Mr. Puckle thinks that the

necessary allotment can be made at the settlement, in communication with the Collector and the Board agree to this.

(13) Should Irrigation sources be grouped into 1st, 2nd, 3rd and 4th classes as proposed by Mr. Rundall, or should whole villages be grouped into four classes with reference to Irrigation and other considerations as proposed by Mr. Puckle?

Mr. Rundall paras 49 to 55 and 111, 112.
Mr. Puckle para 6.

The advantages and disadvantages of the two systems are fully set forth in the paragraphs quoted. Particular attention is solicited to Mr. Rundall's

para

Paras 55 and 112. The Board
have reserved over the con-
troversy.

(111) Should a third
grade be added to the?
Mr. Rundall - paras 44th 115.
Mr. Puckle - para 16
The Board - para 16
Mr. Rundall has limited
only two grades for dry
but a third is added by
Mr. Puckle and affirmed
by the Board in view
to its being availed of in
case of necessity. This seem
s to be unobjectionable, as
it will not, as Mr. Puckle
says, in any way affect
the figures of the
Salute now reported

on.

Q. in

1773

No 591 Revenue Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT,
under date the 6th April 1881.

Read Proceedings of the Board of Revenue, dated 11th October 1880, No. 1195, reviewing the scheme for settlement of the North Arcot District.

C. No. 6701 of 1880.

After a careful consideration of the proposals contained in the paper read above, the Right Honorable the Governor in Council is of opinion that it is not advisable to modify Mr. Pundall's carefully elaborated scheme in the arbitrary manner proposed by Mr. Puckle and accepted by the Board, which, in fact, abandons the results so laboriously worked out by Mr. Pundall with the

result

result of making a very consi-
derable addition to the enhance-
ment which Mr. Pendall proposes
on the existing demand.

2. The argument based on
increase by penury is fallacious,
for the actual holding is not in-
creased by adopting a different
method of measuring it, and the
old assumed average rate was
not the basis for the demand
but was deduced from it. The
conversion from the old methods
measurement was inaccurate, and
statistics deduced from it are
unreliable. What the Ryot
holds and pays for is the
same land however it may
be measured.

3. Mr. Pendall's proposals
result in 17% increase in the
single crop assessment of the
wet

wet land and 3% in that of
the dry. Mr. Puckle would leave
the latter proposals unchanged
but would raise the wet crop
assessment by 26% which the
Govt. consider excessive. No doubt
arguments can be found to justi-
fy it in the abstract, but one great
object of the revision was to obtain
uniformity of principle in all the
Districts, and should arbitrary
rates be adopted in the present
instance this important point
would be abandoned.

4. The settlement should
be carried out in Mr. Pendall's
scheme and the Govt. permit
its extension to the whole District
with the proposed additional dry
rate for use when necessary.

5. The 2nd Crop charge
should be settled as has been
done elsewhere and not by a

uniform

result of making a very consi-
derable addition to the enhance-
ment which Mr. Pendall proposes
on the existing demand.

2. The argument based on
increase by survey is fallacious,
for the actual holding is not in-
creased by adopting a different
method of measuring it, and the
old assumed average rate was
not the basis for the demand
but was deduced from it. The
conversion from the old native
measurement was inaccurate and
statistics deduced from it are
unreliable. What the Ryot
holds and pays for is the
same land however it may
be measured.

3. Mr. Pendall's proposals
result in 17% increase in the
single crop assessment of the
wet

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wet land and 3% in that of
the dry. Mr. Puckle would leave
the latter proposals unchanged
but would raise the wet crop
assessment by 26% which the
Govt. consider excessive. No doubt
arguments can be found to justi-
fy it in the abstract, but one great
object of the revision was to obtain
uniformity of principle in all the
District, and should arbitrary
rates be adopted in the present
instance this important point
would be abandoned.

4. The Settlement should
be carried out in Mr. Pendall's
scheme and the Govt. permit
its extension to the whole District
with the proposed additional dry
rate for use when necessary.

5. The 2nd. Crop charge
should be settled as has been
done elsewhere and not by a

uniform

uniform rate of one half additional.
Composition for a permanent
double scrip rate should be en-
=couraged as has been done in
other cases.

6. The Govt see no reason
for ordering a general measurement
of individual holdings but desire
that the settling officer should
this to be done whenever he sees
reason to think that the pro-
=portional distribution of the survey
increase in any case is seriously
inequitable.

7. The increase of assess-
ment in individual cases will
be imposed gradually as usual.

8. The gross values and
commutation rates have been
worked out on approved prin-
=ciples by Mr. Randall and
should not be arbitrarily altered.

9. The treatment of swell
lands as dry is on standing
principle

principle which in no ac-
=count should be deemed
open to discussion.

10. As to the suggestion for
the general adoption of Mr.
Wilsons progressive rate in
the three districts remaining to
be settled. Neither the Board nor
Mr. Puckle advocate it positively
and the Govt consider that it
should not be allowed. The Board
say that in two of the three dis-
=tricts the work has been already to
a considerable extent done on the old
system, and that in view of
future revision it is desirable
to have the whole process worked
out and recorded, and what Mr.
Puckle says of economy that
might have been effected years
ago by the other method, ignores the
fact that the materials for Mr.
Wilson's Table of fixed rates

for

for particular classes of soil were not then accumulated.

11. The decision of such a point should be founded on the experience which has been adopted, not only for the sake of uniformity of principle, but also in view to future revision when the basis will be agreed on which to proceed.

Q C C

List from orders.

Ins. to the Board of Inland Revenue
not sent to Mr Wilson

Ins. - - Dist. Inspectors of Taxes

Printed orders
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C.J.O.

Scheme for the Settlement of Land in the Arid Districts.

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