Archives I—10,000—6-10-76.

(1) Number of pages 50

(2) Date of repair

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue. DEPARTMENT

G.O. No.	3255	Press.
B.P. No.		Mis.
Dated	16-11-1877	197 .

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

16th November 1877, No. 3,255.

Read the following papers :—

No. 156. Proceedings of the Board of Revenue, dated 26th July 1877, No. 3,490.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to H. E. STOKES, Esq., Secretary to the Board of Revenue, dated Saidapet, 25th April 1877, No. 388 :—

I HAVE the honor to submit a copy (printed) of my report for the official year 1875-76. A report on my tour in the Coimbatore District is bound with it.

2. Unfortunately the whole of the appendices had been printed before the Order of Government, regarding the matter to appear as appendices, No. 1,452, dated the 30th of December 1876, was received, but in future reports compliance will be given to the instructions conveyed.

3. Under the arrangements approved in Board's Proceedings, No. 718, dated the 20th of February, I trust to be able to submit my future reports at a much earlier date than I have hitherto been able.

ENCLOSURE No. 1.—Copy of Annual Report.

THIS report is in two parts, the first containing notes on the tour made by the Superintendent in the Coimbatore District under G.O., dated 1st November 1875, No. 1,150, with observations of a general nature, and the second containing an account of the year's operations at the Saidapet Farm.

2. The Superintendent was on tour between the 13th January 1876 and 11th April 1876, and during that time made almost a complete circuit of the Coimbatore District. The upland taluq of Collegal was wisely omitted as having, with reference to agriculture, no real connection with the other parts of the district. The notes on this tour evidence careful observation on the part of the Superintendent, and contain much interesting matter. Many of the remarks relate to subjects which are now, and have been for several years, the subject of grave consideration by the Board and by Government. The Board will comment briefly on the principal questions raised in the different paragraphs.

3. In remarking on the bareness of the landscape and on neglected opportunities with regard to tree-planting at paragraphs 9 to 17, the Board doubt whether the Superintendent has made sufficient allowance for the natural sterility of the country.

A comparison is made between Ireland and India, but the two countries are dissimil
in almost every particular, and it does not appear what good can be derived fro
contrasting their agricultural methods. As regards the planting of trees, it should b
observed that the inhabitants plant fruit-trees in considerable quantities, and that
is only in fuel planting that there is a deficiency; this however is due to the ver
unremunerative character of fuel planting when carried out in the soils usually m
with. The Superintendent advocates a system of compelling ryots to plant trees o
cultivated land, but the practical difficulties which would attend such interferenc
on the part of the State are obvious. The Government offer various inducements t
the planting of trees by private individuals, in the removal of tax on trees situated i
private holdings, in the grant of land on favorable terms for the formation of private
topes, and in the gratuitous grant of land for topes which, though planted by private
persons, may be shown to be for the public benefit. The operations of the Revenue and
Forest Departments in forming fuel plantations from the proceeds of the Jungle Conser-
vancy Fund have been reported on by the Board in a recent paper still under the consideration of Government. The

Proceedings, dated 12th September 1876, No. 2,329.

statements which are sometimes publicly made, and which are repeated in the repor
now under review, regarding a decreasing rainfall as attendant on diminished tree-
growth are, in the present state of meteorological and agricultural observation, little
more than assertions, or at best matters of opinion, and the Board are disposed to
think that the inferences drawn on the present occasion should be received with
caution as possibly fallacious.

4. The Superintendent's remarks regarding excess irrigation, which amount i
fact to recommending manure as a substitute for a surplus supply of water, are of a
important nature. It is difficult to see, however, whence a sufficiency of manure, o
the capital wherewith to purchase it, is to be procured. Moreover the difficul
would be enormous if an attempt was made by the State to regulate the su
water in every village throughout the country. The villag
season use more water than is sufficient to fertilize their lands, the statemen
being out of all proportion in excess of the fac
graph 31 on this head
other hand, that the present system is successful in keeping the wet-g
constant condition of fertility is a fact established by experience all ove
and is admitted in the paragraphs themselves now under review. Again, in a
cating more economical and wider-spread use of irrigation water, it must be born
mind that the natural conformation of the country gives certain areas only as profit
commanded by certain sources of water-supply.

5. In his description of sub-tenantry at paragraph 42 the Superintendent i
strictly correct. With few exceptions, the sub-tenant pays to the Government te
not a fixed quantity of grain, but a fixed percentage of the crop.

6. The importance of making the provisions of the Land Improvement Act
generally known, and if possible more freely acted on, especially with reference t
sinking of wells, engages the Board's attention. It is necessary to watch the re
of the recent concessions made by the Government in certain districts in the direc
of simplification of procedure. The Board do not think that the cultivators stan
any need of Government assistance in the selection of sites for wells. There i
reason, however, why the Public Works Department should not aid in making t
borings, and the Board commend the remarks on this head at paragraph 57 to
notice of Government.

7. The double rhota recommended at paragraph 61 as a substitute f
ordinary inclined plane bullock water-lift has been before the native public for
years, and has, the Board believe, found little favor. It was introduced at Said
before the appointment of the present Superintendent, from a model supplie
the then Farm Committee by the Raja of Venkatagiri. It has also been trie

batore, Palmanair, and other places by district officers. The Superintendent
d render much service if he could take practical measures for establishing its
riority.

8. The remarks made at paragraphs 72 to 81 will doubtless, when the report
blished, engage the attention of companies and individuals engaged in the tobacco
e.

9. Wheat, mentioned at paragraphs 87 to 92, is not a remunerative crop
outhern India, and the Board do not anticipate its extension to any particular
ee.

10. The Superintendent points out at paragraph 108 and succeeding paragraphs
the gradual additions being made yearly to the area of unirrigated cultivation
lve a disadvantage in two ways, first in the abandonment of so much pasture land,
secondly in the taking up of inferior soils. He would encourage the keeping of
under grass, and he would apply improved agriculture to the poorer lands newly
n up. Both these matters require detailed investigation.

The remarks at paragraph 152 with reference to the pasture question
esent the situation correctly as far as they go. The special concessions
ined in the district hukamnamah, which enable the ryots of Coimbatore to
by Government arable lands for pasture at a reduced rate, are now taken advantage
the ryots much less than they were twenty or thirty years ago, an increasing
ation having stimulated the competition for lands, and the applicant ready to
h on full assessment being given by Government a preference over the applicant
s only ready to keep the land under grass at one-fourth assessment. From the
ks made at paragraphs 108, 109, 112, 159, &c., the reader would have no option
infer further that the result of this has been to diminish the actual number of
used for pasture in the arable portion of the village areas. This is far from
the case. From the cultivation returns it is possible to ascertain the exact
or of acres which, though retained in the putta, have not been touched by the
h. These cases will be in Coimbatore of three sorts: first, where for want of
nment water or other special claims for indulgence full remission is given for the
o left waste; secondly, where three-fourths remission is given under the special
ss land" arrangement; and, thirdly, where no remission at all is given, the land
left fallow for pasture. The statement given at the close of these Proceedings
for nineteen faslis the total holdings of ryots in Coimbatore, with the amount of
oldings which have been entirely uncultivated, a subdivision being made under
heads just mentioned. It will be seen from column 3 that the amount of
in that condition for want of water is comparatively trifling throughout

From column 4 it will be seen that land left waste on the "grass land"
diminished in area in the proportion of $4\frac{1}{2}$ to 1; but from column 5 it will
Sup at the land voluntarily left fallow by the holders has increased in area in the
No. of 1 to $7\frac{1}{2}$. Thus the latter more than counterbalances the former, and the
of t together show a net increase of area left waste in the proportion of 1 to $1\frac{1}{3}$.
t about the same increase as has taken place in total holdings, and the
Apr between waste left for pasture and total holdings remains constant during
Dis at about 10 per cent. It thus appears that the ryots now leave fallow for
rene poses a sufficient number of fields to compensate for the loss of the lightly-
not ass land, and that the only difference under the changes referred to by the
con dent is that these changes have thrown on the ryots instead of on Govern-
now urden of paying for the pasture. The fact that area of pasture ayacut had
and ch area of cultivated ayacut was stated broadly in Proceedings, dated 2nd
raise December 1876, No. 3,044,* addressed to
ow forwarded to Government. the Superintendent; but, though they are
with aragraph 152, the Superintendent does not make any mention of this
Sup ain, at paragraph 160 the Superintendent gives a calculation designed to

show that live-stock viewed as a source of manure has fallen far behind area of cultivation; but the Board do not understand the figures, their own figures contained in Statement B in the Proceedings just quoted showing an increase in the number of cattle of 50 per cent. Even if the sheep be taken at only one-eighth of the numbers represented, as suggested by the Superintendent, the result in the total column is not much affected. It is not true then that either fallow-pasture or live-stock for manure have fallen behind the area of cultivation. Had this been shown to be the case, the Board would not have experienced much surprise, as they believe a relative diminution in the former to be a natural result in a poor country where cultivation is being forced on by a growing population. The result, however, has not yet occurred to any appreciable extent, the only perceptible change up to the present date being that less favorable areas are now probably given up for pasture than was the case formerly. It is to be gathered from the report that the Superintendent proposes, with a view to ameliorating pasture, that greater concessions should be made on the part of Government in favor of cultivable land kept under grass, and that grass crops under wells and tank irrigation should be encouraged. The Board are not prepared to take the responsibility of making any recommendations to Government on the former head. It has just been shown that private enterprise has in Coimbatore fully kept pace with the demands caused by increased occupation of the land. Moreover the Board doubt whether pecuniary concessions of any reasonable amount would have any practical effect on such a question. Concessions were recently made at the Revenue Settlement at Oossoor, in the Salem District, with regard to grazing lands, but the amount was trifling, nor do the Board think that the cases were exactly analogous. At

G.O., dated 23rd September 1875, No. 1,401.

any rate they consider that such concessions in Coimbatore are quite uncalled for. As to growing grass on irrigable areas as an irrigated crop, the ryots will, of course, do this when it can be shown to be profitable; but it is doubtful when such a time will arrive. The custom of this country is to encourage the spontaneous growth of grass in jungle or waste land and no more. Such grass, though not of the best quality, is at any rate in ordinary seasons abundant. In the case of the Coimbatore District the Board have already pointed out, in their Proceedings of the 2nd December already quoted, that, in addition to the natural pasturage of the plains, the inhabitants can depend on the never-failing supplies given by the slopes of the Anamalais and Nilgiris. It might be added that within the villages themselves there remain outside the cultivated areas large tracts of land assessed but not yet taken up, or again of unassessed poramboke land.

The second conclusion to be drawn from the Superintendent's remarks is that the extension of unirrigated cultivation implies the gradual taking up of soils which are more and more inferior; that this land will, as a rule, be taken up by paupers who can afford no better; that the poverty of the land and occupier alike will gradually produce a class having but a precarious livelihood and having a tendency to become a burden on the State; and that as a remedy for this it is desirable to apply to the newly-taken-up and poorer lands an improved method of agriculture. No objection can possibly be taken to this statement if a system which will compensate for such poor soils, coupled in bad seasons with absence of rain, can be found. A question however necessarily arises out of this subject as to the general desirability or undesirability of encouraging small-sized holdings of land. According to the present regulations and their interpretation by the law courts no limit whatever is placed on the smallness of a holding under Government. The arguments on each side are evidently very conflicting. On the one hand it is true that the proprietor of a small holding under Government will probably be a mere man of straw unable to escape pauperism in bad seasons, and it is also true perhaps that food-grains cannot be successfully grown on such small plots. It is true also that the contrast on the score of fixity of tenure actually made in other countries between small holdings and large estates to the disparagement of the latter does not apply here. It applies in those cases because

the real cultivator is there a mere tenant-at-will on an estate with but a small interest in the land. In the case of this country a practical security of tenure is common to all holders of land, to the large landholder, to the small landholder, and even under the custom of the country in great measure to the sub-tenant, mostly "metayer," of the former. On the other hand it may be said that, whereas the population question is the principal question underlying these considerations, there is nothing to show that in this country facilities for the increase of small holdings tend to produce an increase of population; while many arguments might be advanced against allowing the revenue system to interfere with natural processes in the subdivision of landed property. The Board think that there is no alternative but to let the problem work itself out. On the last occasion of the subject being raised, when the matter was gone into on more technical grounds, the Government appear to have been of the same opinion.

Board's Proceedings, dated 19th May 1873, No. 832.
Board's Proceedings, dated 17th August 1874, No. 2,276.
G.O., dated 2nd November 1874, No. 1,385.

11. The Board do not entirely endorse the statement made at paragraph 121 that the ryots know nothing of the rotation of crops. The principle is understood, but the ryots have no root crops worth mention, and the poorer lands have to be frequently fallowed in consequence. One result that may be anticipated from the operations of the new School of Agriculture is the acquirement and dissemination of correct views on this point.

12. The absence of weeding operations mentioned at paragraph 122 is true only for certain periods of the year. Weeding is carried on while the rains last and for a short time afterwards. The chief weeds are the Hariyali and other grasses which are pulled up to feed cattle.

13. The Superintendent's remarks as to the need for lime as manure for cotton cultivation are worthy of notice. The Board presume that the want of lime is felt seriously in other cultivation also.

14. At paragraphs 157 and 158 the Superintendent makes a very important statement to the effect that land cultivated with dry crops have been showing a rapid deterioration of late years. In the entire absence of evidence to prove the fact, the Board will hope that the fact is not true. It is difficult to understand how, if land has deteriorated 30 per cent. within the last twenty-five years, any fertility at all can have remained in it after previous centuries of almost uninterrupted cultivation. The Board observe that in his 1872-73 report the Superintendent accused the wet-land irrigators of the country of rendering the land unproductive, and that he has in his present report, and even in one of the paragraphs under notice, taken back this opinion; the Board hope, therefore, that the Superintendent will find grounds hereafter for modifying his present opinion about the prejudicial effects of native dry cultivation also.

15. The Board agree, with reference to paragraphs 198 to 200, that, if practical difficulties with regard to illicit use could be overcome, it would be highly desirable for Government to sell salt for agricultural purposes at a reduced rate. The important nature of the difficulties would, however, have to be considered.

16. The remarks at paragraphs 212 to 216 illustrate a well-grown fact, that the towns of the present day need increased fuel supplies. The suggestions regarding town plantations deserve the attention of municipal bodies.

17. Fish culture, mentioned at paragraphs 217 to 219, is at this moment the subject of correspondence between the Revenue Board and Government, and it is not necessary to discuss the matter here.

18. In their Administration Report for 1875-76, the Board gave, in anticipation of the present Farms Report, a succinct account of the year's operations at the Saidapet farms. It is unnecessary, therefore, to go in detail into the second part of the report under notice which consists for the most part of a similar but amplified history of the year. The remarks at paragraph 26 regarding concrete and at paragraph 29 regarding subsoil drainage are interesting. The experiments described at paragraph 67 and

following paragraphs confirm the fact already ascertained that the black-cotton soils require but little rain, and that they absorb moisture freely from the air.

19. In the question of certain statistics, the Superintendent has arrived at erroneous conclusions, being set wrong probably in the first instance by ryots or others in the Coimbatore District interested in the maintenance of the special pasture-transition system. There are also two incorrect assumptions running through the whole report, that the Government can interfere to any extent it pleases with the agriculture practised by the ryot, and that the backwardness of Indian agriculture is entirely due to the ignorance or perversity of the cultivators. As to the first, it is well known that Government have always abstained on considerations both of law and policy, on assuming an absolute proprietorship in occupied lands, and that they have never pushed their proprietary rights in such cases further than to demand a detailed State interference or Government share; this is not consistent with a As to the second, the inducement really lies against the processes of agriculture is wanted is more capital, that is to say, more invested savings. The is no spendthrift, and at the present day he is to no particular extent a miser. The cause of backward cultivation lies therefore behind him in the poverty of the whole community of which he is a member. Education, facilitation of transport, improvement of industrial processes, and similar changes will doubtless do much to improve matters; but the soil, climate, numbers of population, and other factors will probably always conspire to give results disappointing to European expectations. Allowing, however, that the Superintendent has considerably overshot the mark in many of his statements and deductions, the Board are quite sensible that it is a great advantage to have criticisms on indigenous agriculture from an independent and often new point of view. On this account, and with a view to the great pains evidently bestowed on the subject by the Superintendent, the Board consider that special thanks are due to him for the present report.

STATEMENT showing the Ryots' Holdings exclusive of Nilgiris in the District of Coimbatore for nineteen Faslis.

Faslis.	Actual Cultivation.		Land uncultivated.								Total Holdings.	
			With Full Remissions chiefly for lack of Government Water.		With three-fourth Remissions on Grass Lands.		With no Remission mainly Fallow for Pasture.		Total.			
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Full Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
1267	1,418,486	23,81,402	.....	.....	143,926	1,16,176	29,564	33,336	173,490	1,49,512	1,591,976	25,31,004
1268	1,452,049	24,28,939	2,121	16,431	137,513	1,10,582	34,432	32,589	174,066	1,59,502	1,626,115	25,88,441
1269	1,539,138	25,13,369	1,462	10,226	128,050	1,02,864	48,776	45,864	178,288	1,58,954	1,708,426	26,72,323
1270	1,531,949	24,68,350	18,740	75,605	124,506	99,906	52,785	48,481	196,031	2,23,992	1,727,980	26,92,342
1271	1,557,128	25,28,436	98,268	1,01,391	120,767	96,855	798	7,192	219,833	2,05,438	1,776,971	27,33,874
1272	1,528,052	26,25,262	4,303	9,032	116,269	92,544	80,977	65,923	201,489	1,67,500	1,729,542	27,92,762
1273	1,684,566	24,60,276	6,373	13,360	108,701	86,822	110,444	80,743	225,518	1,80,925	1,910,024	26,49,991
1274	1,751,991	22,37,138	7,319	19,698	100,835	78,150	99,491	76,939	207,645	1,74,787	1,959,536	24,11,925
1275	1,792,381	22,76,499	10,297	58,495	90,892	72,054	195,881	1,64,032	300,170	2,94,581	2,092,501	25,11,080
1276	1,856,677	23,73,736	2,337	9,793	86,504	68,495	268,571	2,38,848	342,412	3,17,046	2,199,089	26,95,784
1277	1,875,832	22,94,144	88,676	94,534	79,742	63,209	169,861	1,56,266	338,279	3,14,009	2,214,111	26,08,243
1278	1,894,800	23,23,674	3,141	17,578	75,291	59,851	256,379	2,23,440	334,811	3,00,859	2,229,311	26,24,333
1279	1,941,397	23,81,810	1,148	5,246	75,025	56,454	282,159	2,14,362	304,332	2,76,062	2,245,729	26,57,872
1280	1,928,655	23,25,933	3,150	19,044	67,783	53,717	307,770	2,51,050	378,703	3,23,791	2,307,358	26,49,784
1281	2,037,239	23,81,420	8,945	29,384	60,981	48,305	191,768	1,69,665	256,694	2,47,352	2,293,926	26,28,772
1282	2,044,581	23,89,194	2,939	20,713	38,569	30,131	204,293	1,76,860	245,901	2,26,704	2,290,482	26,15,898
1283	2,018,551	23,80,447	1,757	8,923	36,376	28,336	228,825	1,93,403	266,958	2,32,667	2,285,509	26,13,114
1284	2,050,656	23,99,702	1,907	9,603	34,411	26,936	211,752	1,87,878	248,070	2,24,417	2,298,726	26,24,119
1285	2,051,377	23,87,259	4,264	28,365	33,654	25,440	218,740	1,90,063	255,658	2,43,868	2,307,035	26,31,127

(Signed) C. D. MACLEAN,
Additional Sub-Secretary.

To the Secretary to Government, Revenue Department,
with copies of Report and of Board's Procs., dated 2nd Dec. 1876, No. 3,044.
„ the Superintendent of Government Farms, with copy of Board's Procs.,
dated 12th Sept. 1876, No. 2,329, and of G.O., dated 23rd Sept. 1875, No. 1,401.

ENCLOSURE No 1.

Proceedings of the Board of Revenue, dated 2nd December 1876.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 10th June 1876, No. 311 :—

DURING my recent tour in the Coimbatore District, I was frequently informed by the ryots that amongst other causes which have tended to bring about the present low condition of agriculture and agriculturists in that part of the Presidency are—

(1.) The almost entire disappearance of grass land in the district, from nearly the whole having been brought under the plough when the assessment on grass land was raised to a level with that on arable land—thus limiting seriously the food for stock, and consequently reducing their number—thus lessening the supply of manure, while in the wider extent of arable land making the requirements for manure greater.

(2.) From the large increase in the population of the district, a considerable proportion of the families now consisting of five children and upwards; whereas twenty years ago, from the greater prevalence of disease, few families consisted of more than three or four children; there being thus many more mouths to feed than formerly was the case, while not only now is there much less food raised per acre, but the acreage under food-grains is reduced by the large extent of land now under cotton, and the food-grains that are produced in the district are not now, as formerly, consumed within the district, but are removed beyond its limits by the Railway and other means; the increase in the price of produce not compensating for the diminished crops and increased family demand for food.

2. I shall feel exceedingly obliged if the Board can favor me with any statistics showing the acreage under grass and under arable crops previous to the last twenty or thirty years; any statistics showing the number and kinds of live-stock in the district; and statistics showing the prices of food-grains, &c., at about the same period. Also, I shall be glad to be favored with a loan of any papers bearing on the change in the assessment of grass lands in the district.

3. I learn from the last Census report that the increase in the population of the Coimbatore and Nilgiri District (which in the early Census were classed together) is nearly 700,000 persons.

LANDS held by ryots in the Coimbatore District are of two classes—Patent and grass. The former are subject to full assessment, and the latter to one-fourth assessment, the other three-fourths being remitted. Under the existing rules, any person is competent to apply for the occupancy of grass lands on full assessment, and when such application is made, the holder of the land must either give up the land to the applicant or take it up himself on full assessment. The area of grass lands held on one-fourth assessment is not known from the records of this office, and the Collector will be requested to submit a statement showing their area during each of the last twenty or thirty years.

2. The statement of ryots that grass lands in the district have altogether disappeared, nearly the whole having been brought under plough, is not strictly correct; for, although there may be a diminution in the area of grass lands held on one-fourth assessment, the area used as pasture is not now less than what it was before. In Fasli 1284, more than 10 per cent. of the occupied area of Government land was left uncultivated, no doubt for the sake of pasture, and the same was the percentage of occupied lands retained for pasture eighteen years ago. The remission granted on account of grass land in Fasli 1284 was 20,000 Rupees. Besides the occupied lands thus retained uncultivated, there are the evergreen slopes of the Anamalais and the Nilgiris, which afford abundance of pasture. The Collector will, however, be requested to submit his observations on the complaint of the ryots, and refer the Board to any correspondence that has taken place in regard to these grass lands.

	Total Area.	Waste.	Percentage.
Fasli 1237 ...	1,363,000	173,000	12·6
" 1284 ...	4,298,000	423,000	10·8

3. Statements showing the number and kinds of live-stock and the prices of grains will be forwarded to the Superintendent as requested. In Fasli 1248, the number of live-stock was 998,000, while in fasli 1284, the same was 1,518,000.

Government Land.	Fasli 1285.	Fasli 1284.
	Acres.	Acres.
Total Cultivation	1,586,000	2,051,000
Land under Cotton	122,500	174,500
	Percentage.	Percentage.
	8·94	8·61

4. With reference to the statement of the ryots that the agricultural depression is due partly to the increase of population and the extension of cotton cultivation, the Board have only to observe that the proportion of land under cotton to the whole cultivation was in Fasli 1284 less than what it was in Fasli 1285.

(A true Copy and Extract:)

(Signed) H. E. STOKES,
Secretary.

A.

Statement showing the Ryots' Holdings, exclusive of Nilgiri, in the District of Coimbatore.

Faslies.	Actual Cultivation.		Waste charged and remitted.		Total Holdings.	
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
1267	1,413,486	23,81,492	178,490	1,49,512	1,591,976	25,31,004
1268	1,452,042	24,23,939	174,066	1,69,502	1,626,115	25,88,441
1269	1,530,138	26,13,369	178,288	1,68,951	1,708,426	26,72,323
1270	1,531,543	24,68,250	196,031	2,23,092	1,727,980	26,92,342
1271	1,597,138	26,28,436	219,833	2,05,438	1,776,971	27,33,874
1273	1,628,053	26,25,262	201,489	1,67,500	1,829,642	27,92,762
1274	1,684,506	24,60,276	225,518	1,89,625	1,910,024	26,49,901
1275	1,761,991	22,37,188	207,546	1,74,787	1,969,536	24,11,925
1276	1,792,331	22,16,499	360,170	2,94,581	2,092,501	25,11,080
1277	1,856,877	22,78,736	342,412	3,17,046	2,199,089	25,95,782
1278	1,876,832	22,94,144	338,279	3,14,099	2,214,111	26,08,243
1279	1,894,503	23,23,674	334,811	3,00,869	2,229,311	26,24,583
1280	1,941,397	23,61,310	304,322	2,76,062	2,245,725	26,37,372
1281	1,828,655	23,25,993	378,703	3,25,791	2,207,358	26,49,784
1282	2,087,282	23,81,420	356,094	3,47,362	2,293,926	26,28,772
1283	2,044,581	23,89,104	246,901	2,26,704	2,290,482	26,15,898
1284	2,018,551	22,80,447	266,958	2,33,667	2,285,509	26,13,114
	2,050,856	23,99,702	248,970	2,24,417	2,288,726	26,24,119

B.

Statement showing the Number and Kinds of Live-stock excluding Nilgiris in the District of Coimbatore.

Fasli.	Number of Ploughs.	Cattle.				
		Bullocks and Cattle.	Cows.	She Buffaloes.	Sheep.	Total.
1248	71,581	373,912	253,646	81,619	388,712	997,889
1249	73,193	273,145	253,810	82,155	393,234	1,002,344
1261	74,643	271,666	253,594	81,843	382,006	988,509
1262	77,753	252,856	258,226	81,788	416,252	1,008,122
1263	79,485	262,663	260,855	81,542	415,430	1,019,870
1254	80,214	262,757	263,641	81,213	418,593	1,026,204
1256	81,918	263,741	265,640	80,137	418,117	1,027,635
1256	83,915	252,133	256,662	74,266	405,397	988,448
1257	84,302	255,586	259,665	72,336	401,759	986,338
1258	85,631	263,707	245,315	73,764	407,827	990,813
1269	86,716	267,778	247,808	74,564	412,715	1,002,861
1260	87,103	272,204	251,805	75,326	424,965	1,027,800
1261	88,055	281,619	273,915	80,028	472,833	1,111,395
1262	88,598	299,247	286,206	81,164	476,596	1,143,213
1263	..	No information available.				
1264	..	Do.	..	Do.	..	..
1265	..	Do.	..	Do.	..	..
1266	..	Do.	..	Do.	..	..
1267	105,339	226,191	180,126	30,137	383,972	820,420
1268	..	No information available.				
1269	..	Do.	..	Do.	..	..
1270	..	Do.	..	Do.	..	..
1271	..	Do.	..	Do.	..	..
1272	124,421	292,603	211,908	49,588	606,282	1,159,436
1273	..	No information available.				
1274	..	Do.	..	Do.	..	..
1275	..	Do.	..	Do.	..	..
1276	..	Do.	..	Do.	..	..
1277	147,289	318,599	210,677	49,927	696,298	1,284,501
1278	..	No information available.				
1279	..	Do.	..	Do.	..	..
1280	..	Do.	..	Do.	..	..
1281	..	Do.	..	Do.	..	..
1282	173,011	364,258	253,642	49,487	856,227	1,517,612
1283	..	No information available.				
1284	..	Do.	..	Do.	..	..
	..	Do.	..	Do.	..	..

B.

Statement showing the Prices of Grains per Garce of 3,200 Measures in the Coimbatore District from Fasli 1248.

Fasli.	Coimbatore.					
	Paddy.		Cholum.	Cumboo.	Ragi.	Horse-gram.
	1st Sort.	2nd Sort.				
1248	113	97	116	94	105	130
1249	102	99	106	90	91	137
1250	101	86	98	92	85	123
1251	85	71	79	72	67	91
1252	72	58	64	54	55	82
1253	73	68	66	58	56	93
1254	85	77	76	62	64	94
1255	119	111	134	110	113	117
1256	145	135	191	155	162	205
1256	120	104	139	110	120	157
1257	87	72	80	61	68	87
1258	89	77	74	62	65	85
1259	78	68	75	57	60	86
1260	77	69	80	59	62	91
1261	79	71	81	66	68	88
1262	107	99	129	104	104	128
1263	138	126	180	144	143	180
1264	153	142	183	139	157	191
1265	149	136	164	131	142	180
1266	198	180	256	206	212	238
1267	222	191	254	200	213	254
1268	180	166	167	137	147	151
1269	200	183	189	146	160	191
1270	208	189	215	174	189	273
1271	202	183	233	172	189	225
1272	204	186	206	161	169	178
1273	241	221	251	209	209	230
1274	270	240	313	269	280	319
1275	344	309	437	310	363	465
1276	251	206	271	215	241	272
1277	252	227	297	234	236	289
1278	229	204	257	187	193	211
1279	182	162	187	149	145	164
1280	162	142	160	133	125	181
1281	174	148	175	136	131	173
1282	185	167	234	177	170	230
1283	201	179	236	170	174	236
1284						

No. 157. Proceedings of the Board of Revenue, dated 20th September 1877, No. 4,548.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent, Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 29th August 1877, No. 752:—

I HAVE the honor to submit the following observations with reference to certain portions of my recent Coimbatore Report which the Board have either misunderstood, or deem to be unworthy of credit,—*vide* their Proceedings, No. 3,490, of 26th July last.

2. *Board's paragraph* 3; *2nd Sentence.*—I had no intention of comparing the farming of Ireland and of India. What I did compare was the enterprize of the

cultivators of the two countries. I submit, with every deference to the Board's opinion, that there is much in the circumstances of the Irish Peasant Farmer and of the Indian Ryot that will admit of comparison on equal grounds.

3. *Board's paragraph* 4; *the latter portion of the 4th Sentence.*—I was not surprised to read that the Board consider the statement made in paragraph 31 of my report regarding the quantity of water used in irrigation as "out of all proportion in excess of the facts;" nevertheless, the facts are, I believe, as I have stated. The information was afforded to me by ryots who rent land irrigated from the upper portion of the Calingaroyen channel, by ryots who rent land at Neroor watered by a channel of the Cauvery; also by ryots who hold land watered by the Amravutty near Caroor and at Dharapuram. I would refer the Board to paragraph 32 of my Annual Report for 1874-75, where they will learn that in an irrigation experiment supervised by an officer of the Public Works Department as much as 9 feet of water and 28 inches of rainfall were used to bring to maturity an ordinary crop of paddy.

4. *Board's paragraph* 5.—The remarks made in paragraph 42 of my report had reference, as was noted, to sub-tenants on *wet* land. The facts noted are in accordance with what was stated to me, and I cannot see what motive the ryots could possibly have had in making such statements if, as the Board assume, they are untrue.

5. *Board's paragraph* 7.—The "Double Mhote" was introduced on the Sydapet Farm since I took charge of it. In erecting the first machine, the driving part was copied from a model brought to this country from Australia by E. G. R. Fane, Esq., formerly the Collector of Chingleput; the rope-arrangement and buckets were copied from a sketch which was, I understood, supplied to the then Farm Committee by the Rajah of Venkatagiri. Since that time the machine has been much improved, and many models of it have been distributed over the country to private individuals and to Government officers, amongst latter being the Collector of Coimbatore who constructed the first machine used in his district from a model so supplied.

6. *Board's paragraph* 10; *2nd Clause, 3rd and 4th Sentences.*—The figures given in the statement at the end of the Proceedings under notice show conclusively that *there has been during the past nineteen years upwards of* 700,000 *acres of land added to the rented area*, and *there must, therefore, have been a corresponding diminution in the area of the unrented or common land.* From the Board's statement just referred to I take the following:—

	Acres of rented land.
Fasli 1267 (1857-58)	1,591,976
,, 1285 (1875-76)	2,307,035
Excess area, being addition to the area of rented land	715,059

The Board say that the larger area of the rented land which is now usually left uncultivated compared with what was usual twenty years ago compensates for this loss of common pasturage, but it needs only a glance at the figures of the statement to show that in this the Board are under a misapprehension. The increase in the area of uncultivated rented land is only 82,168 acres, as follows:—Fasli 1267 (1857-58) 173,490 acres; Fasli 1285 (1875-76) 256,658 acres. Thus, even assuming that this temporarily uncultivated land produces as good a natural vegetation for pasturage as the land that is unrented, we have of it only in round numbers 82,000 acres against the 715,000 acres taken from the common unrented pasturage area of the district.

7. *Board's paragraph* 10; *2nd Clause, 13th Sentence.*—The table given in my paragraph 160 is based on the statement communicated to me by the Board with the Proceedings quoted by them; it is, I believe, correct as far as it is possible for such a statement to be. It shows that for the area now under occupation the *live-stock is* 50 *per cent. less than it was thirty years ago.* It will be seen on examining the figures that since the official year 1838-39 the live-stock of the district has increased only 17·6 per cent., while the area of rented land has increased 142·3 per cent.

8. *Board's paragraph* 14; *the latter portion.*—I regret to observe that the Board attempt to charge me with inconsistency on the assumption that I hastily, in 1872, formed certain opinions regarding the wet land cultivation of this country, and have as hastily and with as little reason abandoned those opinions. The remarks, I presume, to which the Board refer in my Report for 1872-73 are those under heading "Sub-soil draining," paragraph 23; if so, I have only to observe that a further experience of five years has served only to convince me of the soundness of the opinions there expressed. The Board have overlooked the fact that many of my remarks regarding the practice of irrigation in the Coimbatore District referred to conditions very different to those common throughout the Presidency. I would refer the Board to the latter portion of paragraph 31 of my Coimbatore Report which appears to have escaped their notice: "Such a deluge of water would ruin any ordinary land situated on the level, but, fortunately for the cultivators of the irrigated land, the water is in most instances at a much higher altitude than the irrigated land, and this has admitted of the land being laid out in terraces; in this way the possibility of the irrigation water accumulating on, or in the land, to an extent to prove injurious is provided against."

9. I shall feel much obliged if the Board will be good enough to submit this letter to Government in continuation of their Proceedings, No. 3,490, of the 26th of July last.

SUBMITTED to Government.

2. The Superintendent's remarks at paragraph 6 may be read in addition to those made by the Board in paragraph 10, Clause 2, of their Proceedings, dated 26th July 1877, No. 3,490; but there is no contradiction. The Board confined their remarks in the Proceedings just quoted, and in their Proceedings, dated 2nd December 1876, No. 3,044, to pointing out that, during the period of twenty years referred to in the Superintendent's correspondence with the Board, private enterprize had been successful in maintaining the same ratio between pasture and other lands within the occupied area. The Superintendent now points out that the enlargement of the occupied area, or of the farm so to speak, has diminished the outlying area around the farm. The Board have not gone into this part of the question. Until it can be ascertained what proportion the general outside pasture bears to the special pasture within the occupied area, and what are the habits of the people in their use of one or the other, it does not appear that any practical conclusions can be arrived at. The unoccupied land in Coimbatore more than equals in amount the occupied, and is more than ten times the amount of special pasture land. For pasture purposes it is a highly indeterminate quantity, and the Board would prefer fuller information than is now available before giving any opinion as to whether there has been dangerous encroachment or not.

3. The Board's remarks referred to at paragraph 7 related to a period of nineteen faslis, the only period for which there were accurate satistics. The Superintendent's remarks apply to a period of thirty years.

4. The reference given at paragraph 8 is correct.

(Signed) C. D. MACLEAN,
Additional Sub-Secretary.

No. 158. ORDER THEREON, 16th November 1877, No. 3,255.

Miscellaneous.

WITH the carlier of these Proceedings the Board forward the Annual Report on the Government Farms for 1875-76, in which under the heading "General" is included a very full account of a tour made by the Superintendent through the Coimbatore District in the early part of 1876.

The Board's remarks are confined to this portion of the report; and as they see reason to differ from many of the conclusions arrived at by Mr. Robertson, a discussion has arisen which is very inconvenient when raised in connection with an Administration Report.

These detailed reports of Mr. Robertson's tours will be more useful if submitted in a separate form and through the Collector of the District, whose local knowledge will generally enable him to explain and elucidate things that perplex a stranger or strike him unfavorably, or on which he has been incorrectly informed. This arrangement will also enable Mr. Robertson to submit his Administration Report at an earlier date. The Government have on a previous occasion pointed out that the value of these reports is much lessened by their late receipt.

2. The Government desire at the outset to express their appreciation of the careful and exhaustive nature of the Superintendent's report on his tour. They are fully alive to the advantage of being placed in possession of the impressions made by the general appearance of the country, the villages, and the people on a thoroughly capable observer; and if they do not specifically notice many of the subjects touched upon, it is because these can be more appropriately dealt with at another time.

3. *Land irrigated from Rivers and Tanks.*—Mr. Robertson was much impressed by the amount of water that is apparently unutilized, and also by the lavish use of that which is available. He remarks on the immense volumes of water which pass away especially by the Cauvery; and, though the wants of the districts nearer the sea that depend on this supply are dismissed somewhat too lightly, his impression is on the whole a correct one, and projects are not wanting for utilizing the surplus water that comes down from the hills. At present, attention may be more profitably paid to the other point mooted by the Superintendent, who describes, the practice followed by the cultivator in irrigating paddy lands. His calculations as to the quantity of water used are considered excessive by the Board, but, be this as it may, there is a very general opinion among those more immediately connected with irrigation that water is used by the cultivator with quite unnecessary lavishness. Further experiment is needed to set the question at rest; and in the meantime the practice followed is not without advantage, for all agree that the additional silt deposited by constant fresh supplies of water maintains the land in a state of unimpaired productiveness, and no interference seems required except, as at present, to secure the fair distribution of the water.

How large is the quantity of silt brought down by the rivers after rain is conclusively shown by the experiment made with water taken on two different occasions from the Calingaroyen channel that is supplied by the Bowani river, and the Superintendent's reasons for considering that the good effects unquestionably produced on the soil by irrigation are mainly due to the silt, and not to the properties of the water, seem well established.

4. *Lands irrigated from Wells.*—Wells are as a rule excavated at the cost of the cultivator; and to this fact Mr. Robertson attributes the greater economy which he believes he can trace in the use of water obtained from this source. The lesser quantity of water used may however not improbably be connected with the crops raised on these lands which do not apparently include paddy. Here also Mr. Robertson holds that the supply is larger than would be required if more manure were used, and the experiments made at the farm seem to show that in the case of some classes of soil at all events the addition of organic matter would have the effect imagined.

5. According to Mr. Robertson's calculations, the extent of land under well irrigation is already nearly* double that irrigated from tanks and rivers; but it is capable of almost indefinite extension, and, having in view the varied and useful nature of the crops grown and the skill that is even now shown in their cultivation, the enterprise deserves every encouragement.

* 88,622 and 150,000.

The ryot has now the inducement of knowing that if he thus improves his holding he will not on this account be called upon for any additional assessment, but he

is no doubt heavily weighted by the uncertainty and expense attending well sinking. It is possible that assistance might be rendered by the Government undertaking trial borings as suggested by Mr. Robertson, and the Chief Engineer for Irrigation will be asked to advise on this point.

In the meantime the Government wish every success to Mr. Robertson's endeavors to promote a better use of the wells now existing, and they are glad to learn that the water-lift recommended by him is in use in the Coimbatore Municipality where it can be seen by the cultivators of the district.

6. The Superintendent speaks favorably of the wheat grown in the Coimbatore District under wells, and suggest its production being stimulated and fresh seed being introduced. The Board are of opinion that wheat is not a remunerative crop in South India, but as the development of the trade in wheat has recently been urged by the Secretary of State, steps should be taken to carry out Mr. Robertson's suggestion.

7. *Unirrigated lands.*—The method of cultivation ordinarily followed on dry lands is condemned by Mr. Robertson as unintelligent and inherently vicious. He finds that the average rate of assessment has fallen considerably during the last eighteen years, and believes this proves that the large amount of waste land taken up is of inferior description. He deduces from this the rapid growth of a population of pauper cultivators, which he regards with alarm. The quality of waste land cannot be safely inferred from the low rate of assessment attached to it under a less exact system, and the way in which fresh land has been gradually taken up shows that it has been found profitable to the cultivator. At the same time recent experience has unhappily demonstrated the truth of Mr. Robertson's remarks as to the general poverty of the holders of dry lands, and any remedy that can be suggested deserves consideration. That pointed out here is an improvement in the agricultural practice, which would make the land yield more in ordinary years and enable it to some extent to withstand drought.

8. The chief thing wanting is said to be manure. Elsewhere in the report the non-use of manure is attributed in part to the apathy of the ryot; but here Mr. Robertson gives reasons for considering that enough stock for manuring purposes is not and cannot be kept. He shows that, while the waste lands formerly available for grazing are being curtailed, no corresponding improvement is attempted in the so-called grass lands kept for feeding cattle, to enable them to support the necessary stock. The Board are apparently of opinion that the existing waste lands still afford ample grazing; and from the available statistics they are disinclined to believe that the live stock for manure has fallen behind the area of cultivation. The importance of the subject is so great that it is desirable further information should be obtained, and the Collector should be required to report on it fully in connection with the complaint regarding the grass lands that has already* been referred to him.

* Board's Proceedings, dated 2nd December 1876, No. 3,044.

9. *Live Stock.*—To insufficiency of pasture the ryots attribute a grievous degeneration of their cattle and horses. They spoke "with pride of a period twenty or thirty years ago when they possessed fine breeds of cattle and horses;" but Mr. Robertson himself met with only undersized horses and ponies with nothing to recommend them; and among several hundred head of cattle at Kongiem only saw "perhaps a dozen animals" that "afforded evidence of the qualities of the breed." This degeneration he fully believes in as a necesssary consequence of the mismanagement of the grass lands. He states that the ryots know nothing whatever about raising grasses from seed, and they will no doubt have much to learn in this respect as the question comes to be forced upon them by the growing value of land for cultivation purposes; but the Government hope that by that time the theory of an improved agricultural practice will be more widely known among them through the agencies now at work.

10. Mr. Robertson is inclined to think that mule breeding might be profitably undertaken, and it will be referred to the Commissariat Department and the Remount

Agent for consideration, whether useful experiment might not be made at Hoonsoor or Ossoor both in mule breeding and the improvement of the once famed Kongiem cattle.

11. In paragraphs 198—200 the Superintendent remarks on the present price of salt as prohibitive of its use for stock or as manure. This matter has long engaged the attention of the Government and will not be lost sight of, as they consider it essential that some provision be made to meet the want.

12. *The Ryot.*—In common with other observers, Mr. Robertson has been deeply impressed with the state of indebtedness prevalent among the cultivators. It is believed that recent legislation has improved the position of the burdened ryot together with that of other debtors; but the Advocate-General and Government Pleader will be requested to favor the Government with their remarks on paragraph 189 of the Superintendent's report.

13. *The Government Farms.*—Owing to the extraordinary character of the season the field work on the Government farms was carried on under very adverse circumstances; but the results are recorded of useful experiments made with various indigenous crops and with seed imported from Australia. The experience gained by several years' cultivation of New Orleans cotton is likely to prove very valuable, and the Government await with interest the result of the attempt that is to be made to induce the plant to alter its bearing season.

14. The qualities of the buffalo grass, as described in the extracts from Australian and American sources, render it probable that it could with advantage be planted on canal banks in this country; and the experience gained in its further cultivation should be carefully noted for communication to the Public Works Department.

15. The Government gather from Mr. Robertson's remarks on the [illegible] drained land that he is satisfied with the result of the experiment; and as it has now been some years under trial they desire to be furnished with a full and detailed report as ordered in G.O., 3rd November 1874, No. 1,391. The conditions under which it was undertaken and prosecuted, the results obtained, and the reasons for supposing it a success should be fully detailed.

16. The Government have read with much interest the account of the examination made of the properties of different soils and the careful experiments made to determine their power to absorb and retain moisture. The effect of the addition of organic matter was specially remarkable in the case of the sandy soils where, by the addition of 5 per cent. organic matter, 10 per cent. more moisture was absorbed.

17. The experiments made to ascertain the depths at which seeds germinate most readily are likely to be of much practical importance, and should be persevered with under varying conditions of soil and cultivation.

18. The Superintendent's remarks as to the necessity of importing good bulls from Europe and Australia, if improvement is to be effected in the milk-producing powers of the Native cattle, will receive the attention of the Board in connection with the stock farm now being established.

19. The thanks of Government are due to the Superintendent and other Farm officers for their careful conduct of the year's operations.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To the Board of Revenue.
" Public Works Department.
" Military Department.
" Government Solicitor.
" Government Pleader.

Ed. W. J. Lewis, A. Grubert, W. H. French.

Spare copies.

No. 3,490.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 26th July 1877.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to H. E. STOKES, Esq., Secretary to the Board of Revenue, dated Saidapet, 25th April 1877, No. 388:—

I HAVE the honor to submit a copy (printed) of my report for the official year 1875-76. A report on my tour in the Coimbatore District is bound with it.

2. Unfortunately the whole of the appendices had been printed before the Order of Government, regarding the matter to appear as appendices, No. 1,452, dated the 30th of December 1876, was received, but in future reports compliance will be given to the instructions conveyed.

3. Under the arrangements approved in Board's Proceedings, No. 718, dated the 20th of February, I trust to be able to submit my future reports at a much earlier date than I have hitherto been able.

ENCLOSURE No. 1.—Copy of Annual Report.

THIS report is in two parts, the first containing notes on the tour made by the Superintendent in the Coimbatore District under G.O., dated 1st November 1875, No. 1,150, with observations of a general nature, and the second containing an account of the year's operations at the Saidapet Farm.

2. The Superintendent was on tour between the 13th January 1876 and 11th April 1876, and during that time made almost a complete circuit of the Coimbatore District. The upland taluq of Collegal was wisely omitted as having, with reference to agriculture, no real connection with the other parts of the district. The notes on this tour evidence careful observation on the part of the Superintendent, and much interesting matter. Ma[illegible] relate to subjects which [illegible] the Board believe, for [illegible] bet[illegible]pointment of the pre[illegible] the then Farm Committee by the Raja of [illegible]renkatagiri. It has also been tried at Coimbatore, Palmanair, and other places by district officers. The Superintendent would render much service if he could take practical measures for establishing its superiority.

8. The remarks made at paragraphs 72 to 81 will doubtless, when the report is published, engage the attention of companies and individuals engaged in the tobacco trade.

9. Wheat, mentioned at paragraphs 87 to 92, is not a remunerative crop in Southern India, and the Board do not anticipate its extension to any particular degree.

10. The Superintendent points out at paragraph 108 and succeeding paragraphs that the gradual additions being made yearly to the area of unirrigated cultivation involve a disadvantage in two ways, first in the abandonment of so much pasture land and secondly in the taking up of inferior soils. He would encourage the keeping of land under grass, and he would apply improved agriculture to the poorer lands newly taken up. Both these matters require detailed investigation.

The remarks at paragraph 152 with reference to the pasture question represent the situation correctly as far as they go. The special concessions contained in the district hukamnamah, which enable the ryots of Coimbatore to occupy Government arable lands for pasture at a reduced rate, are now taken advantage of by the ryots much less than they were twenty or thirty years ago, an increasing population having stimulated the competition for lands, and the applicant ready to plough on full assessment being given by Government a preference over the applicant who is only ready to keep the land under grass at one-fourth assessment. From the remarks made at paragraphs 108, 109, 112, 159, &c., the reader would have no option but to infer further that the result of this has been to diminish the actual number of

4. The Superintendent's remarks regarding excess irrigation, which amount in fact to recommending manure as a substitute for a surplus supply of water, are of an important nature. It is difficult to see, however, whence a sufficiency of manure, or the capital wherewith to purchase it, is to be procured. Moreover the difficulties would be enormous if an attempt was made by the State to regulate the supply of water in every village throughout the country. The villagers do not in an ordinary season use more water than is sufficient to fertilize their lands, the statement at paragraph 31 on this head being out of all proportion in excess of the facts. On the other hand, that the present system is successful in keeping the wet-crop land in a constant condition of fertility is a fact established by experience all over the country, and is admitted in the paragraphs themselves now under review. Again, in advocating more economical and wider-spread use of irrigation water, it must be borne in mind that the natural conformation of the country gives certain areas only as profitably commanded by certain sources of water-supply.

5. In his description of sub-tenantry at paragraph 42 the Superintendent is not strictly correct. With few exceptions, the sub-tenant pays to the Government tenant not a fixed quantity of grain, but a fixed percentage of the crop.

6. The importance of making the provisions of the Land Improvement Act more generally known, and if possible more freely acted on, especially with reference to the sinking of wells, engages the Board's attention. It is necessary to watch the results of the recent concessions made by the Government in certain districts in the direction of simplification of procedure. The Board do not think that the cultivators stand in any need of Government assistance in the selection of sites for wells. There is no reason, however, why the Public Works Department should not aid in making trial borings, and the Board commend the remarks on this head at paragraph 57 to the notice of Government.

7. The double mhote recommended at paragraph 61 as a substitute for the ordinary inclined plane bullock water-lift has been before the native public for some little favor. It was introduced at Baldapet [illegible] subject of grave consideration [illegible] ment briefly on the principal questions

3. In remarking on the bareness of the landscape and on neglected opportunities with regard to tree-planting at paragraphs 9 to 17, the Board doubt whether the Superintendent has made sufficient allowance for the natural sterility of the country. A comparison is made between Ireland and India, but the two countries are dissimilar in almost every particular, and it does not appear what good can be derived from contrasting their agricultural methods. As regards the planting of trees, it should be observed that the inhabitants plant fruit-trees in considerable quantities, and that it is only in fuel planting that there is a deficiency; this however is due to the very unremunerative character of fuel planting when carried out in the soils usually met with. The Superintendent advocates a system of compelling ryots to plant trees on cultivated land, but the practical difficulties which would attend such interference on the part of the State are obvious. The Government offer various inducements to the planting of trees by private individuals, in the removal of tax on trees situated in private holdings, in the grant of land on favorable terms for the formation of private topes, and in the gratuitous grant of land for topes which, though planted by private persons, may be shown to be for the public benefit. The operations of the Revenue and Forest Departments in forming fuel plantations from the proceeds of the Jungle Conservancy Fund have been reported on by the Board in a recent paper still under the consideration of Government. The statements which are sometimes publicly made, and which are repeated in the report now under review, regarding decreasing rainfall as attendant on diminished tree-growth are, in the present state of meteorological and agricultural observation, little more than assertions, or at best matters of opinion, and the Board are disposed to think that the inferences drawn on the present occasion should be received with caution as possibly fallacious.

Proceedings, dated 12th September 1876, No. 2,329.

acres used for pasture in the arable portion of the village areas. This is far from being the case. From the cultivation returns it is possible to ascertain the exact number of acres which, though retained in the putta, have not been touched by the plough. These cases will be in Coimbatore of three sorts; first, where for want of Government water or other special claims for indulgence full remission is given for the land so left waste; secondly, where three-fourths remission is given under the special "grass land" arrangement; and, thirdly, where no remission at all is given, the land being left fallow for pasture. The statement given at the close of these Proceedings shows for nineteen faslis the total holdings of ryots in Coimbatore, with the amount of those holdings which have been entirely uncultivated, a subdivision being made under the three heads just mentioned. It will be seen from column 3 that the amount of waste left in that condition for want of water is comparatively trifling throughout the period. From column 4 it will be seen that land left waste on the "grass land" system has diminished in area in the proportion of $4\frac{1}{2}$ to 1; but from column 5 it will be seen that the land voluntarily left fallow by the holders has increased in area in the proportion of 1 to $7\frac{1}{2}$. Thus the latter more than counterbalances the former, and the two results together show a net increase of area left waste in the proportion of 1 to $1\frac{1}{2}$. This is just about the same increase as has taken place in total holdings, and the percentage between waste left for pasture and total holdings remains constant during the period at about 10 per cent. It thus appears that the ryots now leave fallow for pasture purposes a sufficient number of fields to compensate for the loss of the lightly-assessed grass land, and that the only difference under the changes referred to by the Superintendent is that these changes have thrown on the ryots instead of on Government the burden of paying for the pasture. The fact that area of pasture ayacut had kept pace with area of cultivated ayacut was stated broadly in Proceedings, dated 2nd December 1876, No. 3,044,* addressed to the Superintendent; but, though they are quoted at paragraph 152, the Superintendent does not make any mention of this result. Again, at paragraph 160 the Superintendent gives a calculation designed to show that live-stock viewed as a source of manure has fallen far behind area of cultivation; but the Board do not understand the figures, their own figures contained in Statement B in the Proceedings just quoted showing an increase in the number of cattle of 50 per cent. Even if the sheep be taken at only one-eighth of the numbers represented, as suggested by the Superintendent, the result in the total column is not much affected. It is not true then that either fallow-pasture or live-stock for manure have fallen behind the area of cultivation. Had this been shown to be the case, the Board would not have experienced much surprise, as they believe a relative diminution in the former to be a natural result in a poor country where cultivation is being forced on by a growing population. The result, however, has not yet occurred to any appreciable extent, the only perceptible change up to the present date being that less favorable areas are now probably given up for pasture than was the case formerly. It is to be gathered from the report that the Superintendent proposes, with a view to ameliorating pasture, that greater concessions should be made on the part of Government in favor of cultivable land kept under grass, and that grass crops under well- and tank irrigation should be encouraged. The Board are not prepared to take the responsibility of making any recommendations to Government on the former head. It has just been shown that private enterprise has in Coimbatore fully kept pace with the demands caused by increased occupation of the land. Moreover the Board doubt whether pecuniary concessions of any reasonable amount would have any practical effect on such a question. Concessions were recently made at the Revenue Settlement at Oosoor, in the Salem District, with regard to grazing lands, but the amount was trifling, nor do the Board think that the cases were exactly analogous. At any rate they consider that such concessions in Coimbatore are quite unasked for. As to growing grass on irrigable areas as on irrigated crop, the ryots will, of course, do this when it can be shown to be profitable; but it is doubtful when such a time will arrive. The custom of this country is to encourage the spontaneous growth of grass in jungle or waste land and no more.

* Copy now forwarded to Government.

G.O., dated 23rd September 1875, No. 1,401.

Such grass, though not of the best quality, is at any rate in ordinary seasons abundant. In the case of the Coimbatore District the Board have already pointed out, in their Proceedings of the 2nd December already quoted, that, in addition to the natural pasturage of the plains, the inhabitants can depend on the never-failing supplies given by the slopes of the Anamalais and Nilgiris. It might be added that within the villages themselves there remain outside the cultivated areas large tracts of land assessed but not yet taken up, or again of unassessed poramboke land.

The second conclusion to be drawn from the Superintendent's remarks is that the extension of unirrigated cultivation implies the gradual taking up of soils which are more and more inferior; that this land will, as a rule, be taken up by paupers who can afford no better; that the poverty of the land and occupier alike will gradually produce a class having but a precarious livelihood and having a tendency to become a burden on the State; and that as a remedy for this it is desirable to apply to the newly-taken-up and poorer lands an improved method of agriculture. No objection can possibly be taken to this statement if a system which will compensate for such poor soils, coupled in bad seasons with absence of rain, can be found. A question however necessarily arises out of this subject as to the general desirability or undesirability of encouraging small-sized holdings of land. According to the present regulations and their interpretation by the law courts no limit whatever is placed on the smallness of a holding under Government. The arguments on each side are evidently very conflicting. On the one hand it is true that the proprietor of a small holding under Government will probably be a mere man of straw unable to escape pauperism in bad seasons, and it is also true perhaps that food grains cannot be successfully grown on such small plots. It is true also that the contrast on the score of fixity of tenure actually made in other countries between small holdings and large estates to the disparagement of the latter does not apply here. It applies in those cases because the real cultivator is there a mere tenant-at-will on an estate with but a small interest in the land. In the case of this country a practical security of tenure is common to all holders of land, to the large landholder, to the small landholder, and even [illegible] to the sub-tenant, mostly a metayer. [illegible] principal question underlying these considerations, there is nothing to show that in this country facilities for the increase of small holdings tend to produce an increase of population; while many arguments might be advanced against allowing the revenue system to interfere with natural processes in the sub-division of landed property. The Board think that there is no alternative but to let the problem work itself out. On the last occasion of the subject being raised, when the matter was gone into on more technical grounds, the Government appear to have been of the same opinion.

Board's Proceedings, dated 19th May 1873, No. 832.

Board's Proceedings, dated 17th August 1874, No. 2,276.

G.O., dated 2nd November 1874, No. 1,385.

11. The Board do not entirely endorse the statement made at paragraph 121 that the ryots know nothing of the rotation of crops. The principle is understood, but the ryots have no root crops worth mention, and the poorer lands have to be frequently fallowed in consequence. One result that may be anticipated from the operations of the new School of Agriculture is the acquirement and dissemination of correct views on this point.

12. The absence of weeding operations mentioned at paragraph 122 is true only for certain periods of the year. Weeding is carried on while the rains last and for a short time afterwards. The chief weeds are the Hariyali and other grasses which are pulled up to feed cattle.

13. The Superintendent's remarks as to the need for lime as manure for cotton cultivation are worthy of notice. The Board presume that the want of lime is felt seriously in other cultivation also.

14. At paragraphs 157 and 158 the Superintendent makes a very important statement to the effect that land cultivated with dry crops have been showing a rapid

deterioration of late years. In the entire absence of evidence to prove the fact, the Board will hope that the fact is not true. It is difficult to understand how, if land has deteriorated 30 per cent. within the last twenty-five years, any fertility at all can have remained in it after previous centuries of almost uninterrupted cultivation. The Board observe that in his 1872-73 report the Superintendent accused the wet-land irrigators of the country of rendering the land unproductive, and that he has in his present report, and even in one of the paragraphs under notice, taken back this opinion; the Board hope, therefore, that the Superintendent will find grounds hereafter for modifying his present opinion about the prejudicial effects of native dry cultivation also.

15. The Board agree, with reference to paragraphs 198 to 200, that, if practical difficulties with regard to illicit use could be overcome, it would be highly desirable for Government to sell salt for agricultural purposes at a reduced rate. The important nature of the difficulties would, however, have to be considered.

16. The remarks at paragraphs 212 to 216 illustrate a well-known fact, that the towns of the present day need increased fuel supplies. The suggestions regarding town plantations deserve the attention of municipal bodies.

13. Fish culture, mentioned at paragraphs 217 to 219, is at this moment the subject of correspondence between the Revenue Board and Government, and it is not necessary to discuss the matter here.

17. In their Administration Report for 1875-76, the Board gave, in anticipation of the present Farms Report, a succinct account of the year's operations at the Saidapet farms. It is unnecessary, therefore, to go in detail into the second part of the report under notice which consists for the most part of a similar but amplified history of the year. The remarks at paragraph 26 regarding concrete and at paragraph 30 regarding sub-soil drainage are interesting. The experiments described at paragraph 67 and following paragraphs confirm the fact already ascertained that the black-cotton soils require but little rain, and that they absorb moisture freely from the air.

18. In the question of certain statistics, the Superintendent has arrived at erroneous conclusions, being set wrong probably in the first instance by ryots or others in the Coimbatore District interested in the maintenance of the special pasture-remission system. There are also two incorrect assumptions running through the whole report, that the Government can interfere to any extent it pleases with the agriculture practised by the ryot, and that the backwardness of Indian agriculture is entirely due to the ignorance or perversity of the cultivators. As to the first, it is well known that Government have always abstained, on considerations both of law and policy, from assuming an absolute proprietorship in occupied lands, and that they have never pushed their proprietary rights in such cases further than to demand a punctual payment of the *waram* or Government share; this is not consistent with a detailed State interference of a compulsory nature in the processes of agriculture. As to the second, the indictment really lies against the poverty of the country. What is wanted is more capital, that is to say more invested savings. The Hindu proprietor is no spendthrift, and at the present day he is to no particular extent a miser. The cause of backward cultivation lies therefore behind him in the poverty of the whole community of which he is a member. Education, facilitation of transport, improvement of industrial processes, and similar changes will doubtless do much to improve matters; but the soil, climate, numbers of population, and other factors will probably always conspire to give results disappointing to European expectations. Allowing, however, that the Superintendent has considerably overshot the mark in many of his statements and deductions, the Board are quite sensible that it is a great advantage to have criticisms on indigenous agriculture from an independent and often new point of view. On this account, and with a view to the great pains evidently bestowed on the subject by the Superintendent, the Board consider that special thanks are due to him for the present report.

STATEMENT showing the Ryots' Holdings exclusive of Nilgiris in the District of Coimbatore for nineteen Faslis.

Faslis.	Actual Cultivation.		Land uncultivated.								Total Holdings.	
			With full Remissions chiefly for lack of Government Water.		With three-fourth Remissions on Grass lands.		With no Remission, mainly Fallow for Pasture.		Total.			
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Full Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
1267	1,418,470	23,81,492	.....	.....	143,926	1,16,176	29,564	35,336	173,490	1,51,512	1,591,970	25,31,004
1268	1,462,049	24,28,935	2,121	16,481	137,513	1,10,532	34,452	32,589	174,086	1,59,502	1,636,115	25,88,441
1269	1,580,138	25,13,869	1,462	10,256	128,939	1,02,864	48,778	45,863	178,238	1,58,984	1,758,426	26,72,823
1270	1,531,949	24,68,350	13,720	75,605	126,787	96,885	798	7,192	219,883	2,05,488	1,776,971	27,33,874
1271	1,557,138	25,28,436	98,268	1,01,391	12,544	80,977	65,923	281,489	1,67,500	1,829,542	27,92,762	
1272	1,628,958	26,35,262	4,303	9,013	116,209	89,644	110,444	93,743	225,518	1,92,400	1,854,476	28,27,662
1273	1,684,566	24,80,276	6,373	38,360	108,701	86,522	110,444	93,743	225,518	1,89,625	1,910,084	26,49,901
1274	1,751,991	22,87,138	7,219	12,686	100,835	78,120	99,491	76,939	207,545	1,67,787	1,959,536	24,11,925
1275	1,792,331	22,16,490	16,297	58,495	96,992	71,054	108,883	1,64,032	309,170	2,94,581	2,092,501	25,11,080
1276	1,855,677	22,78,736	2,337	9,293	86,504	68,405	253,571	2,88,868	342,412	3,67,046	2,199,089	25,95,782
1277	1,875,832	22,94,144	3,141	17,568	75,291	59,851	256,870	2,23,440	334,811	3,00,859	2,214,111	26,08,243
1278	1,894,506	23,25,674	1,196	5,246	71,935	56,454	233,159	2,14,362	304,389	2,76,062	2,245,739	26,37,372
1279	1,941,397	23,61,319	3,150	19,044	67,783	53,717	307,770	2,51,030	378,703	3,23,791	2,307,358	26,49,784
1280	1,928,665	23,25,933	3,945	29,384	60,981	48,503	191,768	1,69,665	256,694	2,47,552	2,293,926	26,28,773
1281	2,037,232	25,51,420	2,939	20,718	58,869	50,731	294,293	1,75,860	245,901	2,20,704	2,290,482	26,15,898
1282	2,041,581	25,89,194	1,757	8,923	56,376	28,336	228,885	1,95,408	286,958	2,32,667	2,285,609	26,13,714
1283	2,018,451	23,80,447	1,097	9,893	54,411	26,936	211,752	1,67,878	248,070	2,24,417	2,298,726	26,24,119
1284	2,050,656	23,99,702	4,264	28,365	52,854	25,440	218,749	1,90,063	255,658	2,43,868	2,307,035	26,31,127
1285	2,051,377	23,87,250										

(A true Copy and Extract.)

Chas. Keeling

Additional Sub-Secretary.

To the Secretary to Government, Revenue Department,
with copies of Report and of Board's Procs., dated 2nd Dec. 1876, No. 3,044.
" the Superintendent of Government Farms, with copy of Board's Procs.,
dated 12th Sept. 1876, No. 2,329, and of G.O., dated 23rd Sept. 1875, No. 1,401.

1877.
Board of Revenue.
MADRAS.

PROCEEDINGS, 26TH JULY 1877, No. 3,490.

Received

JULY.
No. 3,490.

Annual Report of Superintendent of Government Farms for 1876-76—reviewed and submitted to Government.

No. 3,044.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 2nd December 1876.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 10th June 1876, No. 316:—

DURING my recent tour in the Coimbatore District, I was frequently informed by the ryots that amongst other causes which have tended to bring about the present low condition of agriculture and agriculturists in that part of the Presidency are—

(1.) The almost entire disappearance of grass land in the district, from nearly the whole having been brought under the plough when the assessment on grass land was raised to a level with that on arable land—thus limiting seriously the food for stock, and consequently reducing their number—thus lessening the supply of manure, while in the wider extent of arable land making the requirements for manure greater.

(2.) From the large increase in the population of the district, a considerable proportion of the families now consisting of five children and upwards; whereas twenty years ago, from the greater prevalence of disease, few families consisted of more than three or four children; there being thus many more mouths to feed than formerly was the case, while not only now is there much less food raised per acre, but the acreage under food-grains is reduced by the large extent of land now under cotton, and the food-grains that are produced in the district are not now, as formerly, consumed within the district, but are removed beyond its limits by the Railway and other means; the increase in the price of produce not compensating for the diminished crops and increased family demand for food.

2. I shall feel exceedingly obliged if the Board can favor me with any statistics showing the acreage under grass and under arable crops previous to the last twenty or thirty years; any statistics showing the number and kinds of live-stock in the district; and statistics showing the prices of food-grains, &c., at about the same period. Also, I shall be glad to be favored with a loan of any papers bearing on the change in the assessment of grass lands in the district.

3. I learn from the last Census report that the increase in the population of the Coimbatore and Nilgiri District (which in the early Censuses were classed together) is nearly 700,000 persons.

LANDS held by ryots in the Coimbatore District are of two classes—Putcut and grass. The former are subject to full assessment, and the latter to one-fourth assessment, the other three-fourths being remitted. Under the existing rules, any person is competent to apply for the occupancy of grass lands on full assessment, and when such application is made, the holder of the land must either give up the land to the applicant or take it up himself on full assessment. The area of grass lands held on one-fourth assessment is not known from the records of this office, and the Collector will be requested to submit a statement showing their area during each of the last twenty or thirty years.

2. The statement of ryots that grass lands in the district have altogether disappeared, nearly the whole having been brought under plough, is not strictly correct;

for, although there may be a diminution in the area of grass lands held on one-f
assessment, the area used as pastu
not now less than what it was before.

	Total Area.	Waste.	Percentage.
Fasli 1267...	1,592,000	173,000	10·8
„ 1284...	2,299,000	248,000	10·8

Fasli 1284, more than 10 per cent. of
occupied area of Government land
left uncultivated, no doubt for the
of pasture, and the same was the perce ntage of occupied lands retained for
eighteen years ago. The remission gr anted on account of grass land in Fas
was 20,000 Rupees. Besides the occupied lands thus retained uncultivated, t
the evergreen slopes of the Anamalais and the Nilgiris, which afford abun
pasture. The Collector will, however, be requested to submit his observations
complaint of the ryots, and refer the Bo ard to any correspondence that has take
in regard to these grass lands.

3. Statements showing the numbe r and kinds of live-stock and the prices c
will be forwarded to the Superintendent as requested. In Fasli 1248, the nur
live-stock was 998,000, while in Fasli 1284, the same was 1,518,000.

4. With reference to the st
of the ryots that the agricultural
sion is due partly to the increase of
tion and the extension of cotton
tion, the Board have only to obser
the proportion of land under
whole cultivation was in F
than what it was in Fasli

Government Land.	Fasli 1265. ACRES.	Fasli 1294. ACRES.
Total Cultivation	1,386,000	2,051,000
Land under Cotton ...	122,500	174,000
	Percentage.	Percentage.
	8·84	8·51

(True Copies and Extract.)

(Signed) H. F. SHAKES,
Acting Secre tary.

To the Superintendent of Government Farms, with three Statements.
„ Collector of Coimbatore.

Exd. W. H. French.

Received
2
Exd.

1876.

Board of Revenue,

MADRAS,

Proceedings, 2nd December 1876, No. 3,044.

DECEMBER.

No. 3,044.

Prices of Grains and Number and Kinds of Live-stock—in Coimbatore District.—Forwarding to Superintendent of Government Farms statements showing—, and requesting Collector to furnish information regarding area of grass lands held on one-fourth assessment during each of last twenty or thirty years.

A.

Statement showing the Ryots'-Holdings, exclusive of Nilgiri, in the District of Coimbatore.

Faslis.	Actual Cultivation.		Waste charged and remitted.		Total Holdings.	
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
1267	1,418,486	23,81,483	173,490	1,49,512	1,591,976	25,31,004
1268	1,452,949	24,28,938	174,066	1,59,503	1,626,115	25,88,441
1269	1,530,138	25,13,363	178,288	1,58,953	1,708,426	26,72,323
1270	1,531,949	24,68,350	196,031	2,23,992	1,727,980	26,92,342
1271	1,857,138	25,98,438	219,833	2,05,436	1,776,971	27,83,874
1272	1,628,053	26,25,253	201,489	1,67,509	1,829,542	27,92,762
1273	1,884,566	24,60,276	235,518	1,80,625	1,916,024	26,49,901
1274	1,751,991	23,87,138	207,545	1,74,787	1,959,536	24,11,925
1275	1,792,331	23,16,490	300,179	2,04,581	2,092,510	25,11,080
1276	1,856,677	22,78,734	342,412	3,17,046	2,199,089	25,95,782
1277	1,875,832	23,94,144	338,279	3,14,099	2,214,111	26,98,243
1278	1,894,500	23,23,674	334,811	3,00,859	2,229,311	26,24,533
1279	1,941,397	23,61,816	304,352	2,76,062	2,245,729	26,37,878
1280	1,928,656	23,25,993	378,763	3,23,791	2,307,356	26,49,784
1281	2,037,232	23,81,426	256,694	2,47,352	2,293,926	26,28,772
1282	2,044,581	23,89,194	245,901	2,26,704	2,290,482	26,15,898
1283	2,018,551	25,80,443	266,958	2,32,667	2,285,509	28,13,114
1283	2,050,636	23,99,705	249,079	2,24,417	2,298,725	26,24,119
1284						

B.

Statement showing the Number and Kinds of Live-stock excluding Nilgiris in the District of Coimbatore.

Faslis.	Number of Ploughs.	Cattle.				
		Tilling Cattle.	Cows.	She Buffaloes.	Sheep.	Total.
1248	71,331	273,91	253,646	81,619	388,712	997,889
1249	73,193	272,14	253,810	82,155	393,344	1,002,344
1250	74,540	271,06	253,594	81,843	382,006	988,509
1251	77,758	252,85	260,835	81,542	415,252	1,008,122
1252	79,485	262,06	263,641	81,313	418,593	1,026,204
1253	80,314	263,75	265,640	80,197	410,317	1,019,870
1254	81,918	263,74	256,652	74,266	405,397	988,448
1255	83,916	252,13	250,655	72,338	401,759	980,334
1256	84,362	285,58	245,515	73,754	407,837	990,813
1257	85,531	268,70	247,808	74,564	412,716	1,003,561
1258	86,716	267,77	254,805	75,326	424,965	1,027,300
1259	87,103	272,20	273,915	80,023	479,853	1,111,395
1260	88,655	284,61	286,206	81,164	476,596	1,143,213
1261	88,593	290,34				
1262		No in	formation available.			
1263	.....	Do.	.....	Do.	.....	.....
1264	.....	Do.	.....	Do.	.....	.....
1265	.....	Do.	.....	Do.	.....	.....
1266	105,339	326,19	180,120	30,137	383,372	820,420
1267		No in	formation available.			
1268	.....	Do.	.....	Do.	.....	.....
1269	.....	Do.	.....	Do.	.....	.....
1270	.....	Do.	.....	Do.	.....	.....
1271	124,421	292,60	211,603	49,538	606,287	1,159,436
1272		No in	formation available.			
1273	.....	Do.	.....	Do.	.....	.....
1274	.....	Do.	.....	Do.	.....	.....
1275	.....	Do.	.....	Do.	.....	.....
1276	147,289	318,69	219,677	49,927	696,298	1,284,601
1277		No in	formation available.			
1278	.....	Do.	.....	Do.	.....	.....
1279	.....	Do.	.....	Do.	.....	.....
1280	.....	Do.	.....	Do.	.....	.....
1281	173,011	364,256	253,642	49,487	850,327	1,517,612
1282		No in	formation available.			
1283	.....	Do.	.....	Do.	.....	.....
1284	.....	Do.	.....	Do.	.....	.....

B.

Statement showing the Prices of Grains per Garce of 3,200 Measures in the Coimbatore District from Fasli 1248.

Fasli.	Coimbatore.					
	Paddy.		Cholum.	Cumboo.	Ragi.	Horse-gram.
	1st Sort.	2nd Sort.				
1248						
1249	113	97	116	94	105	130
1250	102	99	106	90	91	137
1251	101	86	98	92	85	123
1252	85	71	79	72	67	91
1253	72	58	64	54	55	82
1254	73	68	66	58	56	93
1255	85	77	76	62	64	94
1256	119	111	134	110	113	117
1257	145	135	191	155	162	205
1258	120	104	139	110	120	157
1259	87	73	80	61	68	87
1260	89	77	74	62	65	85
1261	78	68	76	61	66	86
1262	77	69	89	59	62	91
1263	79	71	81	66	68	88
1264	107	99	129	104	104	128
1265	138	126	180	144	143	180
1266	153	142	183	139	157	191
1267	149	136	164	131	142	180
1268	198	180	256	206	212	238
1269	222	191	254	200	213	254
1270	180	166	167	137	147	151
1271	200	182	189	146	160	191
1272	208	189	215	174	189	273
1273	202	183	206	161	169	178
1274	241	221	251	209	209	230
1275	270	240	312	269	280	319
1276	344	300	437	310	363	465
1277	251	206	271	215	241	272
1278	252	227	297	234	236	289
1279	229	204	257	187	193	211
1280	182	162	187	149	145	164
1281	162	142	160	133	125	181
1282	174	148	175	136	131	173
1283	185	167	224	177	170	230
1284	201	179	236	176	174	236

No. 4

548.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 28th September 1877.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent, Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 29th August 1877, No. 752:—

I HAVE the honor to submit the following observations with reference to certain portions of my recent Coimbatore Report which the Board have either misunderstood, or deem to be unworthy of credit,—*vide* their Proceedings, No. 3,490, of 26th July last.

2. *Board's paragraph* 3; *2nd Sentence*.—I had no intention of comparing the farming of Ireland and of India. What I did compare was the enterprize of the cultivators of the two countries. I submit, with every deference to the Board's opinion, that there is much in the circumstances of the Irish Peasant Farmer and of the Indian Ryot that will admit of comparison on equal grounds.

3. *Board's paragraph* 4; *the latter Portion of the 4th Sentence*.—I was not surprised to read that the Board considered the statement made in paragraph 31 of my report regarding the quantity of water used in irrigation as "out of all proportion in excess of the facts;" nevertheless, the facts are, I believe, as I have stated. The information was afforded to me by ryots who rent land irrigated from the upper portion of the Calingaroy channel, by ryots who rent land at Neroor watered by a channel of the Cauvery; also by ryots who hold land watered by the Amravutty near Caroor and at Dharapuram. I would refer the Board to paragraph 32 of my Annual Report for 1874-75, where they will learn that in an irrigation experiment supervised by an officer of the Public Works Department as much as 9 feet of water and 28 inches of rainfall were used to bring to maturity an ordinary crop of paddy.

4. *Board's paragraph* 5.—The remarks made in paragraph 42 of my report had reference, as was noted, to sub-tenants on *wet* land. The facts noted are in accordance with what was stated to me, and I cannot see what motive the ryots could possibly have had in making such statements if, as the Board assume, they are untrue.

5. *Board's paragraph* 7.—The "Double Mhote" was introduced on the Sydapet Farm since I took charge of it. In erecting the first machine, the driving part was copied from a model brought to this country from Australia by E. G. R. Fane, Esq., formerly the Collector of Chinglepat; the rope-arrangement and buckets were copied from a sketch which was, I understood, supplied to the then Farm Committee by the Rajah of Vencatagiri. Since that time the machine has been much improved, and many models of it have been distributed over the country to private individuals and to Government officers, amongst latter being the Collector of Coimbatore who constructed the first machine used in his district from a model so supplied.

6. *Board's paragraph* 10; *2nd Clause*, *3rd and 4th Sentences*.—The figures given in the statement at the end of the Proceedings under notice show conclusively that *there has been during the past nineteen years upwards of* 700,000 *acres of land added to the rented area*, and *there must, therefore, have been a corresponding diminution in the area of the unrented or common land*. From the Board's statement just referred to I take the following:—

	Acres of rented land.
Fasli 1267 (1857-58)	1,591,976
,, 1285 (1875-76)	2,307,035
Excess area, being addition to the area of rented land	715,059

The Board say that the larger area of uncultivated compared with what was loss of common pasturage, but it need ment to show that in this the Board ar in the area of uncultivated rented land is (1857-58) 173,490 acres; Fasli 1285 (1 ing that this temporarily uncultivated for pasturage as the land that is unrent 82,000 acres against the 715,000 acres age area of the district.

7. *Board's paragraph* 10; *2nd Cla* paragraph 160 is based on the statemen the Proceedings quoted by them; it is, such a statement to be. It shows that *stock is 50 per cent. less than it was thirty* figures that since the official year 1838-5 only 17·6 per cent., while the area of re

8. *Board's paragraph* 14; *the latte* attempt to charge me with inconsist 1872, formed certain opinions regardi and have as hastily and with as lit remarks, I presume, to which the Boar under heading "Sub-soil draining," par a further experience of five years has s of the opinions there expressed. The my remarks regarding the practice of i to conditions very different to those co ter the Board to the latter portion which appears to have escaped their any ordinary land situated on the lev irrigated land, the water is in fact irrigated land, and this has admitted o way the possibility of the irrigation extent to prove injurious is provided a

9. I shall feel much obliged if th letter to Government in continuation of July last.

SUBMITTED to Government.

2. The Superintendent's remark those made by the Board in paragra 26th July 1877, No. 3,490; but there their remarks in the Proceedings just December 1876, No. 3,044, to pointin referred to in the Superintendent's cor had been successful in maintaining th within the occupied area. The Supe ment of the occupied area, or of the area around the farm. The Board Until it can be ascertained what pr the special pasture within the occupie in their use of one or the other, it do can be arrived at. The unoccupied l the occupied, and is more than ten tim pasture purposes it is a highly indeter fuller information than is now availab there has been dangerous encroachme

the rented land which is now usually left usual twenty years ago compensates for this only a glance at the figures of the state- e under a misapprehension. The increase only 82,168 acres, as follows:—Fasli 1267 875-76) 255,658 acres. Thus, even assum- land produces as good a natural vegetation ed, we have of it only in round numbers taken from the common unrented pastur-

use, 13th Sentence.—The table given in my t communicated to me by the Board with I believe, correct as far as it is possible for for the area now under occupation the *live- years ago.* It will be seen on examining the 0 the live-stock of the district has increased nted land has increased 142·3 per cent.

r portion.—I regret to observe that the Board ncy on the assumption that I hastily, in the wet land cultivation of this country, e reason abandoned those opinions. The refer in my Report for 1872-73 are those agraph 23; if so, I have only to observe that yet only to convince me of the soundness Board have overlooked the fact that many of rrigation in the Coimbatore District referred mmon throughout the Presidency. I would f paragraph 31 of my Coimbatore Report notice: "Such a deluge of water would ruin el, but, fortunately for the cultivators of the stances at a much higher altitude than the f the land being laid out in terraces; in this water accumulating on, or in the land, to an gainst."

e Board will be good enough to submit this of their Proceedings, No. 3,490, of the 26th

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s at paragraph 6 may be read in addition to h 10, Clause 2, of their Proceedings, dated is no contradiction. The Board confined quoted, and in their Proceedings, dated 2nd g out that, during the period of twenty years espondence with the Board, private enterprize same ratio between pasture and other lands rintendent now points out that the enlarge- arm so to speak, has diminished the outlying have not gone into this part of the question. portion the general outside pasture bears to d area, and what are the habits of the people es not appear that any practical conclusions nd in Coimbatore more than equals in amount es the amount of special pasture land. For inate quantity, and the Board would prefer le before giving any opinion as to whether t or not.

3. The Board's remarks referred to at paragraph 7 related to a period of nineteen faslis, the only period for which there were accurate satistics. The Superintendent's remarks apply to a period of thirty years.

4. The reference given at paragraph 8 is correct.

(A true Copy and Extract.)

Additional Sub-Secretary.

To the Secretary to Government, Revenue Department.
" Superintendent of Government Farms.

Copy to the Collr. of Coimbatore, with
Copy of Bd's Pro. of 26th July 1877
No. 3490 & Board's report.

Exd. W. H. French.

Revenue Department
No. 4389.
1877.

Board of Revenue,
MADRAS.

PROCEEDINGS, 28TH SEPT. 1877, No. 4,548.

Read the following papers:—

No. 156. Proceedings of the Board of Revenue, dated 26th July 1877, No. 3,490.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to H. E. STOKES, Esq., Secretary to the Board of Revenue, dated Saidapet, 25th April 1877, No. 388:—

I HAVE the honor to submit a copy (printed) of my report for the official year 1875-76. A report on my tour in the Coimbatore District is bound with it.

2. Unfortunately the whole of the appendices had been printed before the Order of Government, regarding the matter to appear as appendices, No. 1452, dated the 30th of December 1876, was received, but in future reports compliance will be given to the instructions conveyed.

3. Under the arrangements approved in Board's Proceedings, No. 718, dated the 20th of February, I trust to be able to submit my future reports at a much earlier date than I have hitherto been able.

ENCLOSURE No. 1.—Copy of Annual Report.

THIS report is in two parts, the first containing notes on the tour made by the Superintendent in the Coimbatore District under G.O., dated 1st November 1875, No. 1,150, with observations of a general nature, and the second containing an account of the year's operations at the Saidapet Farm.

2. The Superintendent was on tour between the 13th January 1876 and 11th April 1876, and during that time made almost a complete circuit of the Coimbatore District. The upland taluq of Collegal was wisely omitted as having, with reference to agriculture, no real connection with the other parts of the district. The notes on this tour evidence careful observation on the part of the Superintendent, and contain much interesting matter. Many of the remarks relate to subjects which are now, and have been for several years, the subject of grave consideration by the Board and by Government. The Board will comment briefly on the principal questions raised in the different paragraphs.

3. In remarking on the bareness of the landscape and on neglected opportunities with regard to tree-planting at paragraphs 9 to 17, the Board doubt whether the Superintendent has made sufficient allowance for the natural sterility of the country.

Received 30-11-77

Report on Tour made by Superintendent of Government Farms in Coimbatore District in 1875-76.—Submitting to Government this officer furnishing explanation with reference to Board's review of —.

SEPTEMBER.
No. 4,548.

A comparison is made between Ireland and India, but the two countries are dissimilar in almost every particular, and it does not appear what good can be derived from contrasting their agricultural methods. As regards the planting of trees, it should be observed that the inhabitants plant fruit-trees in considerable quantities, and that it is only in fuel planting that there is a deficiency; this however is due to the very unremunerative character of fuel planting when carried out in the soils usually met with. The Superintendent advocates a system of compelling ryots to plant trees on cultivated land, but the practical difficulties which would attend such interference on the part of the State are obvious. The Government offer various inducements to the planting of trees by private individuals, in the removal of tax on trees situated in private holdings, in the grant of land on favorable terms for the formation of private topes, and in the gratuitous grant of land for topes which, though planted by private persons, may be shown to be for the public benefit. The operations of the Revenue and Forest Departments in forming fuel plantations from the proceeds of the Jungle Conservancy Fund have been reported on by

Proceedings, dated 12th September 1876, No. 2,329.

the Board in a recent paper still under statements which are sometimes publicly made, and which are repeated in the report now under review, regarding a decreasing rainfall as attendant on diminished tree-growth are, in the present state of meteorological and agricultural observation, little more than assertions, or at best matters of opinion, and the Board are disposed to think that the inferences drawn on the present occasion should be received with caution as possibly fallacious.

4. The Superintendent's remarks regarding excess irrigation, which amount in fact to recommending manure as a substitute for a surplus supply of water, are of an important nature. It is difficult to see, however, whence a sufficiency of manure, or the capital wherewith to purchase it, is to be procured. Moreover the difficulties would be enormous if an attempt was made by the State to regulate the supply of water in every village throughout the country. The villagers do not in an ordinary season use more water than is sufficient to utilize their lands, the statement at paragraph 31 on this head being out of all proportion in excess of the facts. On the other hand, that the present system is successful in keeping the wet-crop land in a constant condition of fertility is a fact established by experience all over the country, and is admitted in the paragraphs themselves now under review. Again, in advocating more economical and wider-spread use of irrigation water, it must be borne in mind that the natural conformation of the country gives certain areas only as profitably commanded by certain sources of water-supply.

5. In his description of sub-tenantry at paragraph 42 the Superintendent is not strictly correct. With few exceptions, the sub-tenant pays to the Government tenant not a fixed quantity of grain, but a fixed percentage of the crop.

6. The importance of making the provisions of the Land Improvement Act more generally known, and if possible more freely acted on, especially with reference to the sinking of wells, engages the Board's attention. It is necessary to watch the results of the recent concessions made by the Government in certain districts in the direction of simplification of procedure. The Board do not think that the cultivators stand in any need of Government assistance in the selection of sites for wells. There is no reason, however, why the Public Works Department should not aid in making trial borings, and the Board commend the remarks on this head at paragraph 57 to the notice of Government.

7. The double mhote recommended at paragraph 61 as a substitute for the ordinary inclined plane bullock water-lift has been before the native public for some years, and has, the Board believe, found little favor. It was introduced at Saidapet, before the appointment of the present Superintendent, from a model supplied to the then Farm Committee by the Raja of Venkatagiri. It has also been tried at

Coimbatore, Palmanair, and other places by district officers. The Superintendent would render much service if he could take practical measures for establishing its superiority.

8. The remarks made at paragraphs 72 to 81 will doubtless, when the report is published, engage the attention of companies and individuals engaged in the tobacco trade.

9. Wheat, mentioned at paragraphs 87 to 92, is not a remunerative crop in Southern India, and the Board do not anticipate its extension to any particular degree.

10. The Superintendent points out at paragraph 108 and succeeding paragraphs that the gradual additions being made yearly to the area of unirrigated cultivation involve a disadvantage in two ways, first in the abandonment of so much pasture land, and secondly in the taking up of inferior soils. He would encourage the keeping of land under grass, and would apply improved agriculture to the poorer lands newly taken up. Both these matters require detailed investigation.

The remarks at paragraph 152 with reference to the pasture question represent the situation correctly as far as they go. The special concessions contained in the district hukamnamah, which enable the ryots of Coimbatore to occupy Government arable lands for pasture at a reduced rate, are now taken advantage of by the ryots much less than they were twenty or thirty years ago, an increasing population having stimulated the competition for lands, and the applicant ready to plough on full assessment being given by Government a preference over the applicant who is only ready to keep the land under grass at one-fourth assessment. From the remarks made at paragraphs 108, 109, 11[illegible]59, &c., the reader would have no option but to infer further that the result of this [illegible]s been to diminish the actual number of being the case. From the cultivation returns it is possible to ascertain the exact number of acres which, though retained in the putta, have not been touched by the plough. These cases will be in Coimbat[illegible] of three sorts; first, where for want of Government water or other special claims indulgence full remission is given for the land so left waste; secondly, where three-[illegible]ths remission is given under the special "grass land" arrangement; and, thirdly, where no remission at all is given, the land being left fallow for pasture. The statement given at the close of these Proceedings shows for nineteen faslis the total holdings of ryots in Coimbatore, with the amount of those holdings which have been entirely uncultivated, a subdivision being made under the three heads just mentioned. It will be seen from column 3 that the amount of waste left in that condition for want of water is comparatively trifling throughout the period. From column 4 it will be seen that land left waste on the "grass land" system has diminished in area in the proportion of 4½ to 1; but from column 5 it will be seen that the land voluntarily left fallow by the holders has increased in area in the proportion of 1 to 7½. Thus the latter more than counterbalances the former, and the two results together show a net increase of area left waste in the proportion of 1 to 1½. This is just about the same increase as has taken place in total holdings, and the percentage between waste left for pasture and total holdings remains constant during the period at about 10 per cent. It thus appears that the ryots now leave fallow for pasture purposes a sufficient number of fields to compensate for the loss of the lightly-assessed grass land, and that the only difference under the changes referred to by the Superintendent is that these changes have thrown on the ryots instead of on Government the burden of paying for the pasture. The fact that area of pasture ayacut had kept pace with area of cultivated ayacut was stated broadly in Proceedings, dated 2nd

* Copy now forwarded to Government.

December 1876, No. 3,044,* addressed to the Superintendent; but, though they are quoted at paragraph 152, the Superintendent does not make any mention of this result. Again, at paragraph 160 the Superintendent gives a calculation designed to

show that live-stock viewed as a source of manure has fallen far behind area of cultivation; but the Board do not understand the figures, their own figures contained in Statement B in the Proceedings just quoted showing an increase in the number of cattle of 50 per cent. Even if the sheep be taken at only one-eighth of the numbers represented, as suggested by the Superintendent, the result in the total column is not much affected. It is not true then that either fallow-pasture or live-stock for manure have fallen behind the area of cultivation. Had this been shown to be the case, the Board would not have experienced much surprise, as they believe a relative diminution in the former to be a natural result in a poor country where cultivation is being forced on by a growing population. The result, however, has not yet occurred to any appreciable extent, the only perceptible change up to the present date being that less favorable areas are now probably given up for pasture than was the case formerly. It is to be gathered from the report that the Superintendent proposes, with a view to ameliorating pasture, that greater concessions should be made on the part of Government in favor of cultivable land kept under grass, and that grass crops under wells and tank irrigation should be encouraged. The Board are not prepared to take the responsibility of making any recommendations to Government on the former head. It has just been shown that private enterprise has in Coimbatore fully kept pace with the demands caused by increased occupation of the land. Moreover the Board doubt whether pecuniary concessions of any reasonable amount would have any practical effect on such a question. Concessions were recently made at the Revenue Settlement at Oossoor, in the Salem District, with regard to grazing lands, but the amount was trifling, nor do the Board think that the cases were exactly analogous. At any rate they consider that such concessions in Coimbatore are quite uncalled for. As to growing grass on irrigable areas as an irrigated crop, the ryots will, of course, do this when it can be shown to be profitable; but it is doubtful when such a time will arrive. The custom of this country is to encourage the spontaneous growth of grass in jungle or waste land and no more. Such grass, though not of the best quality, is at any rate in ordinary seasons abundant. In the case of the Coimbatore District the Board have already pointed out, in the Proceedings of the 2nd December already quoted, that, in addition to the natural pasturage of the plains, the inhabitants can depend on the never-failing supplies given by the slopes of the Anamalais and Nilgiris. It might be added that within the villages themselves there remain outside the cultivated areas large tracts of land assessed but not yet taken up, or again of unassessed poramboke land.

G.O., dated 23rd September 1875, No. 1,401

The second conclusion to be drawn from the Superintendent's remarks is that the extension of unirrigated cultivation implies the gradual taking up of soils which are more and more inferior; that this land will, as a rule, be taken up by paupers, who can afford no better; that the poverty of the land and occupier alike will gradually produce a class having but a precarious livelihood and having a tendency to become a burden on the State; and that as a remedy for this it is desirable to apply to the newly-taken-up and poorer lands an improved method of agriculture. No objection can possibly be taken to this statement if a system which will compensate for such poor soils, coupled in bad seasons with absence of rain, can be found. A question however necessarily arises out of this subject as to the general desirability or undesirability of encouraging small-sized holdings of land. According to the present regulations and their interpretation by the law courts no limit whatever is placed on the smallness of a holding under Government. The arguments on each side are evidently very conflicting. On the one hand it is true that the proprietor of a small holding under Government will probably be a mere man of straw unable to escape pauperism in bad seasons, and it is also true perhaps that food-grains cannot be successfully grown on such small plots. It is true also that the contrast on the score of fixity of tenure actually made in other countries between small holdings and large estates to the disparagement of the latter does not apply here. It applies in those cases because

the real cultivator is there a mere tenant-at-will on an estate with but a small interest in the land. In the case of this country a practical security of tenure is common to all holders of land, to the large landholder, to the small landholder, and even under the custom of the country, in great measure to the sub-tenant, mostly "metayer," of the former. On the other hand it may be said that, whereas the population question is the principal question underlying these considerations, there is nothing to show that in this country facilities for the increase of small holdings tend to produce an increase of population; while many arguments might be advanced against allowing the revenue system to interfere with natural processes in the subdivision of landed property. The Board think that there is no alternative but to let the problem work itself out. On the last occasion of the subject being raised, when the matter was gone into on more technical grounds, the Government appear to have been of the same opinion.

Board's Proceedings, dated 19th May 1873, No. 833.
Board's Proceedings, dated 17th August 1874, No. 2,376.
G.O., dated 2nd November 1874, No. 1,385.

11. The Board do not entirely endorse the statement made at paragraph 121 that the ryots know nothing of the rotation of crops. The principle is understood, but the ryots have no root crops worth mention, and the poorer lands have to be frequently fallowed in consequence. One result that may be anticipated from the operations of the new School of Agriculture is the acquirement and dissemination of correct views on this point.

12. The absence of weeding operations mentioned at paragraph 122 is true only for certain periods of the year. Weeding is carried on while the rains last and for a short time afterwards. The chief weeds are the Hariyali and other grasses which are pulled up to feed cattle.

13. The Superintendent's remarks at [illegible] cultivation are worthy of notice. The Board presume that the want of time is [illegible] seriously in other cultivation also.

14. At paragraphs 157 and 158 the Superintendent makes a very important statement to the effect that land cultivated with dry crops have been showing a rapid deterioration of late years. In the entire absence of evidence to prove the fact, the Board will hope that the fact is not true. It is difficult to understand how, if land has deteriorated 30 per cent. within the last twenty-five years, any fertility at all can have remained in it after previous centuries of almost uninterrupted cultivation. The Board observe that in his 1872-73 report the Superintendent accused the wet-land irrigators of the country of rendering the land unproductive, and that he has in his present report, and even in one of the paragraphs under notice, taken back this opinion; the Board hope, therefore, that the Superintendent will find grounds hereafter for modifying his present opinion about the prejudicial effects of native dry cultivation also.

15. The Board agree, with reference to paragraphs 198 to 200, that, if practical difficulties with regard to illicit use could be overcome, it would be highly desirable for Government to sell salt for agricultural purposes at a reduced rate. The important nature of the difficulties would, however, have to be considered.

16. The remarks at paragraphs 212 to 216 illustrate a well-grown fact, that the towns of the present day need increased fuel supplies. The suggestions regarding town plantations deserve the attention of municipal bodies.

17. Fish culture, mentioned at paragraphs 217 to 219, is at this moment the subject of correspondence between the Revenue Board and Government, and it is not necessary to discuss the matter here.

18. In their Administration Report for 1875-76, the Board gave, in anticipation of the present Farms Report, a succinct account of the year's operations at the Saidapet farms. It is unnecessary, therefore, to go in detail into the second part of the report under notice which consists for the most part of a similar but amplified history of the year. The remarks at paragraph 26 regarding concrete and at paragraph 29 regarding subsoil drainage are interesting. The experiments described at paragraph 67 and

following paragraphs confirm the fact already ascertained that the black-cotton soils require but little rain, and that they absorb moisture freely from the air.

19. In the question of certain statistics, the Superintendent has arrived at erroneous conclusions, being set wrong probably in the first instance by ryots or others in the Coimbatore District interested in the maintenance of the special pasture-remission system. There are also two incorrect assumptions running through the whole report, that the Government can interfere to any extent it pleases with the agriculture practised by the ryot, and that the backwardness of Indian agriculture is entirely due to the ignorance or perversity of the cultivators. As to the first, it is well known that Government have always abstained, on considerations both of law and policy, from assuming an absolute proprietorship in occupied lands, and that they have never pushed their proprietary rights in such cases further than to demand a punctual payment of the *warum* or Government share; this is not consistent with a detailed State interference of a compulsory nature in the processes of agriculture. As to the second, the indictment really lies against the poverty of the country. What is wanted is more capital, that is to say, more invested savings. The Hindu proprietor is no spendthrift, and at the present day he is to no particular extent a miser. The cause of backward cultivation lies therefore behind him in the poverty of the whole community of which he is a member. Education, facilitation of transport, improvement of industrial processes, and similar changes will doubtless do much to improve matters, but the soil, climate, numbers of population, and other factors will probably always conspire to give results disappointing to European expectations. Allowing, however, that the Superintendent has considerably overshot the mark in many of his statements and deductions, the Board are quite sensible that it is a great advantage to have criticisms on indigenous agriculture from an independent and often new point of view. On this account, and with a view to the great pains evidently bestowed on the subject by the Superintendent, the Board consider that special thanks are due to him for the present report.

STATEMENT showing the Ryots' Holdings exclusive of Nilgiris in the District of Coimbatore for nineteen Faslis.

Faslis.	Actual Cultivation.		Land uncultivated.								Total Holdings.	
			With Full Remissions chiefly for lack of Government Water.		With three-fourth Remissions on Grass Lands.		With no Remission mainly Fallow for Pasture.		Total.			
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Full Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.	ACRES.	RS.
1267	1,418,486	23,81,492	.....	.....	143,926	1,16,176	29,564	33,336	173,490	1,49,512	1,591,976	25,31,004
1268	1,452,049	24,28,989	2,121	16,431	137,513	1,10,532	34,432	32,539	174,066	1,59,502	1,626,115	25,88,441
1269	1,530,138	25,13,369	1,462	10,226	128,050	1,02,864	48,776	45,864	178,288	1,58,954	1,708,426	26,72,323
1270	1,531,949	24,68,350	18,740	75,605	124,506	99,906	52,785	48,481	196,031	2,23,992	1,727,980	26,92,342
1271	1,557,138	25,28,436	98,268	1,01,391	120,767	96,853	798	7,192	219,833	2,05,438	1,776,971	27,33,874
1272	1,628,053	26,25,262	4,303	9,033	116,269	92,544	80,977	65,923	201,489	1,67,500	1,829,542	27,92,762
1273	1,684,506	24,60,276	6,373	13,360	108,701	86,522	110,444	89,743	225,518	1,89,625	1,910,024	26,49,901
1274	1,751,991	22,37,138	7,219	19,698	100,835	78,150	99,491	76,939	207,545	1,74,787	1,959,536	24,11,925
1275	1,792,331	22,16,429	10,297	58,495	90,992	72,054	198,881	1,64,632	300,170	2,94,581	2,092,501	25,11,080
1276	1,856,677	22,78,736	2,337	9,793	86,504	68,405	253,571	2,38,848	342,412	3,17,046	2,199,089	25,95,782
1277	1,875,832	22,94,144	88,676	94,554	79,742	63,299	169,561	1,56,266	338,279	3 14,099	2,214,111	26,08,243
1278	1,894,500	23,23,674	3,141	17,568	75,291	59,851	256,379	2,23,440	334,811	3,00,859	2,229,311	26,24,533
1279	1,941,397	23,61,310	1,148	5,246	71,025	56,454	232,159	2,14,369	304,332	2,76,069	2,245,729	26,37,379
1280	1,928,655	23,20,933	3,160	19,044	67,783	53,717	307,770	2,81,030	378,708	3,53,791	2,307,358	26,49,784
1281	2,037,232	23,81,420	3,945	29,384	60,981	48,303	191,768	1,69,665	256,694	2,47,352	2,293,926	26,28,772
1282	2,044,581	23,89,194	2,939	20,718	38,669	30,131	204,293	1,75,860	245,901	2,26,704	2,290,482	26,15,898
1283	2,018,551	23,80,447	1,757	8,923	36,376	28,236	228,825	1,95,408	266,958	2,32,667	2,285,509	26,13,114
1284	2,050,656	23,99,702	1,907	9,603	34,411	26,936	211,762	1,87,878	248,070	2,24,417	2,298,726	26,24,119
1285	2,051,377	23,87,259	4,264	28,365	32,654	25,440	218,740	1,90,063	255,658	2,43,868	2,307,035	26,31,127

(Signed) C. D. MACLEAN,
Additional Sub-Secretary.

To the Secretary to Government, Revenue Department,
with copies of Report and of Board's Procs., dated 2nd Dec. 1876, No. 3,044.
,, the Superintendent of Government Farms, with copy of Board's Procs.,
dated 12th Sept. 1876, No. 2,329, and of G.O., dated 23rd Sept. 1875, No. 1,401.

ENCLOSURE No 1.

Proceedings of the Board of Revenue, dated 2nd December 1876.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent of Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 10th June 1876, No. 316 :—

DURING my recent tour in the Coimbatore District, I was frequently informed by the ryots that amongst other causes which have tended to bring about the present low condition of agriculture and agriculturists in that part of the Presidency are—

(1.) The almost entire disappearance of grass land in the district, from nearly the whole having been brought under the plough when the assessment on grass land was raised to a level with that on arable land—thus limiting seriously the food for stock, and consequently reducing their number—thus lessening the supply of manure, while in the wider extent of arable land making the requirements for manure greater.

(2.) From the large increase in the population of the district, a considerable proportion of the families now consisting of five children and upwards; whereas twenty years ago, from the greater prevalence of disease, few families consisted of more than three or four children; there being thus many more mouths to feed than formerly was the case, while not only now is there much less food raised per acre, but the acreage under food-grains is reduced by the large extent of land now under cotton, and the food-grains that are produced in the district are not now, as formerly, consumed within the district, but are removed beyond its limits by the Railway and other means; the increase in the price of produce not compensating for the diminished crops and increased family demand for food.

2. I shall feel exceedingly obliged if the Board can favor me with any statistics showing the acreage under grass and under arable crops previous to the last twenty or thirty years; any statistics showing the number and kinds of live-stock in the district; and statistics showing the prices of food-grains, &c., at about the same period. Also, I shall be glad to be favored with a loan of any papers bearing on the change in the assessment of grass lands in the district.

3. I learn from the last Census report that the increase in the population of the Coimbatore and Nilgiri District (which in the early Census were classed together) is nearly 700,000 persons.

LANDS held by ryots in the Coimbatore District are of two classes—Puteut and grass. The former are subject to full assessment, and the latter to one-fourth assessment, the other three-fourths being remitted. Under the existing rules, any person is competent to apply for the occupancy of grass lands on full assessment, and when such application is made, the holder of the land must either give up the land to the applicant or take it up himself on full assessment. The area of grass lands held on one-fourth assessment is not known from the records of this office, and the Collector will be requested to submit a statement showing their area during each of the last twenty or thirty years.

2. The statement of ryots that grass lands in the district have altogether disappeared, nearly the whole having been brought under plough, is not strictly correct; for, although there may be a diminution in the area of grass lands held on one-fourth assessment, the area used as pasture is not now less than what it was before. In Fasli 1284, more than 10 per cent. of the occupied area of Government land was left uncultivated, no doubt for the sake of pasture, and the same was the percentage of occupied lands retained for pasture eighteen years ago. The remission granted on account of grass land in Fasli 1284 was 20,000 Rupees. Besides the occupied lands thus retained uncultivated, there are the evergreen slopes of the Anamalais and the Nilgiris, which afford abundance of pasture. The Collector will, however, be requested to submit his observations on the complaint of the ryots, and refer the Board to any correspondence that has taken place in regard to these grass lands.

	Total Area.	Waste.	Percentage.
Fasli 1267	1,592,000	175,003	10·8
„ 1284	2,299,000	243,000	10·8

3. Statements showing the number and kinds of live-stock and the prices of grains will be forwarded to the Superintendent as requested. In Fasli 1248, the number of live-stock was 998,000, while in fasli 1284, the same was 1,518,000.

Government Land.	Fasli 1265.	Fasli 1284.
	ACRES.	ACRES.
Total Cultivation	1,386,000	2,051,000
Land under Cotton	122,500	174,500
	Percentage.	Percentage.
	8·84	8·51

4. With reference to the statement of the ryots that the agricultural depression is due partly to the increase of population and the extension of cotton cultivation, the Board have only to observe that the proportion of land under cotton to the whole cultivation was in Fasli 1284 less than what it was in Fasli 1285.

(A true Copy and Extract.)

(Signed) H. E. STOKES,
Secretary.

A.

Statement showing the Ryots' Holdings, exclusive of Nilgiri, in the District of Coimbatore.

Faslies.	Actual Cultivation.		Waste charged and remitted.		Total Holdings.	
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
1267	1,418,486	23,81,492	173,490	1,49,512	1,591,976	25,31,004
1268	1,452,049	24,28,939	174,066	1,59,502	1,626,115	25,88,441
1269	1,530,138	25,13,369	178,288	1,58,954	1,708,426	26,72,323
1270	1,531,949	24,68,350	195,931	2,23,992	1,727,880	26,92,342
1271	1,557,138	25,28,436	219,833	2,05,438	1,776,071	27,33,874
1272	1,628,053	26,25,262	201,489	1,67,500	1,829,542	27,92,762
1273	1,684,506	24,60,276	225,518	1,89,625	1,910,024	26,49,901
1274	1,751,991	22,37,138	207,646	1,74,787	1,959,536	24,11,925
1275	1,792,331	22,16,499	300,170	2,91,581	2,092,501	25,11,080
1276	1,856,677	22,78,736	342,412	3,17,046	2,199,089	25,95,782
1277	1,875,832	22,94,144	338,279	3,14,099	2,214,111	26,08,243
1278	1,894,500	23,25,674	334,811	3,00,859	2,229,311	26,24,533
1279	1,941,397	23,61,310	304,332	2,76,062	2,245,729	26,37,373
1280	1,928,055	23,25,993	378,703	3,23,791	2,307,358	26,49,784
1281	2,037,233	23,81,420	256,604	2,47,352	2,293,926	26,28,772
1282	2,044,581	23,89,194	245,901	2,26,704	2,290,482	26,15,898
1283	2,018,551	23,80,447	266,958	2,32,667	2,285,509	26,13,114
1284	2,050,656	23,99,702	248,070	2,24,417	2,298,726	26,24,119

B.

Statement showing the Number and Kinds of Live-stock excluding Nilgiris in the District of Coimbatore.

Fasli.	Number of Ploughs.	Cattle.				
		Tilling Cattle.	Cows.	She Buffaloes.	Sheep.	Total.
1248	71,38	273,912	253,646	81,619	388,712	997,889
1249	75,193	273,145	253,810	82,155	393,234	1,002,344
1250	74,540	271,666	253,594	81,843	382,006	988,509
1251	77,753	252,856	258,226	81,788	415,252	1,008,122
1252	79,485	262,063	260,835	81,542	415,430	1,019,870
1253	80,314	262,787	263,641	81,213	418,593	1,026,204
1254	81,818	263,741	265,640	80,137	418,117	1,027,635
1255	83,916	252,138	256,652	74,266	405,397	988,448
1256	84,262	255,586	250,665	72,338	401,759	980,338
1257	85,631	263,797	245,516	73,754	407,837	990,813
1258	86,716	267,773	247,808	74,564	412,716	1,002,861
1259	87,103	272,204	254,905	75,326	424,965	1,027,300
1260	88,956	284,619	273,915	80,023	472,883	1,111,395
1261	88,998	293,247	296,206	81,164	476,596	1,143,213
1262	..	No information available.				
1263	..	Do.	..	Do.	..	..
1264	..	Do.	..	Do.	..	..
1265	105,339	Do.	..	Do.	..	..
1266	..	226,191	180,120	30,137	383,972	820,420
1267	..	No information available.				
1268	..	Do.	..	Do.	..	..
1269	..	Do.	..	Do.	..	..
1270	124,421	Do.	..	Do.	..	..
1271	..	292,602	211,008	49,558	606,287	1,159,436
1272	..	No information available.				
1273	..	Do.	..	Do.	..	..
1274	..	Do.	..	Do.	..	..
1275	147,289	Do.	..	Do.	..	..
1276	..	318,699	219,677	49,927	696,298	1,284,601
1277	..	No information available.				
1278	..	Do.	..	Do.	..	..
1279	..	Do.	..	Do.	..	..
1280	..	Do.	..	Do.	..	..
1281	173,011	364,256	253,542	49,487	850,227	1,517,512
1282	..	No information available.				
1283	..	Do.	..	Do.	..	..
1284	..	Do.	..	Do.	..	..

B.

Statement showing the Prices of Grains per Garce of 3,200 Measures in the Coimbatore District from Fasli 1248.

Fasli.	Coimbatore.					
	Paddy.		Cholum.	Cumboo.	Ragi.	Horse-gram.
	1st Sort.	2nd Sort.				
1248	113	97	116	94	105	130
1249	102	99	106	90	91	137
1250	101	86	98	92	85	123
1251	85	71	79	72	67	91
1252	72	58	64	54	55	82
1253	73	68	66	58	56	93
1254	85	77	76	62	64	94
1255	119	111	134	110	113	117
1256	145	135	191	155	162	205
1257	120	104	139	110	120	157
1258	87	72	80	61	68	87
1259	89	77	74	62	65	85
1260	78	68	75	57	60	86
1261	77	69	80	59	62	91
1262	79	71	81	66	68	88
1263	107	99	129	104	104	128
1264	138	126	180	144	143	180
1265	153	142	183	139	157	191
1266	149	136	164	131	142	180
1267	198	180	256	206	212	238
1268	222	191	254	200	213	254
1269	180	166	167	137	147	151
1270	200	183	189	146	160	191
1271	208	189	215	174	189	273
1272	202	183	233	172	189	225
1273	204	186	206	161	160	178
1274	241	221	251	209	209	230
1275	270	240	313	269	280	319
1276	344	300	437	310	363	465
1277	251	206	271	215	241	272
1278	252	227	297	234	236	289
1279	229	204	257	187	193	211
1280	182	162	187	149	145	164
1281	162	142	160	133	125	181
1282	174	148	175	136	131	173
1283	185	167	234	177	170	230
1284	201	179	236	176	174	236

No. 157. Proceedings of the Board of Revenue, dated 20th September 1877, No. 4,548.

Read the following letter from W. R. ROBERTSON, Esq., M.R.A.C., Superintendent, Government Farms, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Sydapet, 29th August 1877, No. 752:—

I HAVE the honor to submit the following observations with reference to certain portions of my recent Coimbatore Report which the Board have either misunderstood, or deem to be unworthy of credit,—*vide* their Proceedings, No. 3,490, of 26th July last.

2. *Board's paragraph* 3; *2nd Sentence.*—I had no intention of comparing the farming of Ireland and of India. What I did compare was the enterprize of the

cultivators of the two countries. I submit, with every deference to the Board's opinion, that there is much in the circumstances of the Irish Peasant Farmer and of the Indian Ryot that will admit of comparison on equal grounds.

3. *Board's paragraph* 4; *the latter portion of the* 4*th Sentence.*—I was not surprised to read that the Board consider the statement made in paragraph 31 of my report regarding the quantity of water used in irrigation as "out of all proportion in excess of the facts;" nevertheless, the facts are, I believe, as I have stated. The information was afforded to me by ryots who rent land irrigated from the upper portion of the Calingaroyen channel, by ryots who rent land at Neroor watered by a channel of the Cauvery; also by ryots who hold land watered by the Amravutty near Caroor and at Dharapuram. I would refer the Board to paragraph 32 of my Annual Report for 1874-75, where they will learn that in an irrigation experiment supervised by an officer of the Public Works Department as much as 9 feet of water and 28 inches of rainfall were used to bring to maturity an ordinary crop of paddy.

4. *Board's paragraph* 5.—The remarks made in paragraph 42 of my report had reference, as was noted, to sub-tenants on *wet* land. The facts noted are in accordance with what was stated to me, and I cannot see what motive the ryots could possibly have had in making such statements if, as the Board assume, they are untrue.

5. *Board's paragraph* 7.—The "Double Mhote" was introduced on the Sydapet Farm since I took charge of it. In erecting the first machine, the driving part was copied from a model brought to this country from Australia by E. G. R. Fane, Esq., formerly the Collector of Chingleput; the rope-arrangement and buckets were copied from a sketch which was, I understood, supplied to the then Farm Committee by the Rajah of Vencatagiri. Since that time the machine has been much improved, and many models of it have been distributed over the country to private individuals and to Government officers, amongst latter being the Collector of Coimbatore who constructed the first machine used in his district from a model so supplied.

6. *Board's paragraph* 10; 2*nd Clause*, 3*rd and* 4*th Sentences.*—The figures given in the statement at the end of the Proceedings under notice show conclusively that *there has been during the past nineteen years upwards of* 700,000 *acres of land added to the rented area*, and *there must, therefore, have been a corresponding diminution in the area of the unrented or common land.* From the Board's statement just referred to I take the following:—

	Acres of rented land.
Fasli 1267 (1857-58)	1,591,976
" 1285 (1875-76)	2,307,035
Excess area, being addition to the area of rented land	715,059

The Board say that the larger area of the rented land which is now usually left uncultivated compared with what was usual twenty years ago compensates for this loss of common pasturage, but it needs only a glance at the figures of the statement to show that in this the Board are under a misapprehension. The increase in the area of uncultivated rented land is only 82,168 acres, as follows:—Fasli 1267 (1857-58) 173,490 acres; Fasli 1285 (1875-76) 255,658 acres. Thus, even assuming that this temporarily uncultivated land produces as good a natural vegetation for pasturage as the land that is unrented, we have of it only in round numbers 82,000 acres against the 715,000 acres taken from the common unrented pasturage area of the district.

7. *Board's paragraph* 10; 2*nd Clause*, 13*th Sentence.*—The table given in my paragraph 160 is based on the statement communicated to me by the Board with the Proceedings quoted by them; it is, I believe, correct as far as it is possible for such a statement to be. It shows that for the area now under occupation the *live-stock is* 50 *per cent. less than it was thirty years ago.* It will be seen on examining the figures that since the official year 1838-39 the live-stock of the district has increased only 17·6 per cent., while the area of rented land has increased 142·3 per cent.

8. *Board's paragraph* 14; *the latter portion.*—I regret to observe that the Board attempt to charge me with inconsistency on the assumption that I hastily, in 1872, formed certain opinions regarding the wet land cultivation of this country, and have as hastily and with as little reason abandoned those opinions. The remarks, I presume, to which the Board refer in my Report for 1872-73 are those under heading "Sub-soil draining," paragraph 23; if so, I have only to observe that a further experience of five years has served only to convince me of the soundness of the opinions there expressed. The Board have overlooked the fact that many of my remarks regarding the practice of irrigation in the Coimbatore District referred to conditions very different to those common throughout the Presidency. I would refer the Board to the latter portion of paragraph 31 of my Coimbatore Report which appears to have escaped their notice: "Such a deluge of water would ruin any ordinary land situated on the level, but, fortunately for the cultivators of the irrigated land, the water is in most instances at a much higher altitude than the irrigated land, and this has admitted of the land being laid out in terraces; in this way the possibility of the irrigation water accumulating on, or in the land, to an extent to prove injurious is provided against."

9. I shall feel much obliged if the Board will be good enough to submit this letter to Government in continuation of their Proceedings, No. 3,490, of the 26th of July last.

SUBMITTED to Government.

2. The Superintendent's remarks at paragraph 6 may be read in addition to those made by the Board in paragraph 10, Clause 2, of their Proceedings, dated 26th July 1877, No. 3,490; but there is no contradiction. The Board confined their remarks in the Proceedings just quoted, and in their Proceedings, dated 2nd December 1876, No. 3,044, to pointing out that, during the period of twenty years referred to in the Superintendent's correspondence with the Board, private enterprize within the occupied area. The Superintendent now points out that the enlargement of the occupied area, or of the farm so to speak, has diminished the outlying area around the farm. The Board have not gone into this part of the question. Until it can be ascertained what proportion the general outside pasture bears to the special pasture within the occupied area, and what are the habits of the people in their use of one or the other, it does not appear that any practical conclusions can be arrived at. The unoccupied land in Coimbatore more than equals in amount the occupied, and is more than ten times the amount of special pasture land. For pasture purposes it is a highly indeterminate quantity, and the Board would prefer fuller information than is now available before giving any opinion as to whether there has been dangerous encroachment or not.

3. The Board's remarks referred to at paragraph 7 related to a period of nineteen faslis, the only period for which there were accurate statistics. The Superintendent's remarks apply to a period of thirty years.

4. The reference given at paragraph 8 is correct.

(Signed) C. D. MACLEAN,
Additional Sub-Secretary.

No. 158. ORDER THEREON, 16th November 1877, No. 3,255.

Miscellaneous.

WITH the earlier of these Proceedings the Board forward the Annual Report on the Government Farms for 1875-76, in which under the heading "General" is included a very full account of a tour made by the Superintendent through the Coimbatore District in the early part of 1876.

The Board's remarks are confined to this portion of the report; and as they see reason to differ from many of the conclusions arrived at by Mr. Robertson, a discussion has arisen which is very inconvenient when raised in connection with an Administration Report.

These detailed reports of Mr. Robertson's tours will be more useful if submitted in a separate form and through the Collector of the District, whose local knowledge will generally enable him to explain and elucidate things that perplex a stranger or strike him unfavorably, or on which he has been incorrectly informed. This arrangement will also enable Mr. Robertson to submit his Administration Report at an earlier date. The Government have on a previous occasion pointed out that the value of these reports is much lessened by their late receipt.

2. The Government desire at the outset to express their appreciation of the careful and exhaustive nature of the Superintendent's report on his tour. They are fully alive to the advantage of being placed in possession of the impressions made by the general appearance of the country, the villages, and the people on a thoroughly capable observer; and if they do not specifically notice many of the subjects touched upon, it is because these can be more appropriately dealt with at another time.

3. *Land irrigated from Rivers and Tanks.*—Mr. Robertson was much impressed by the amount of water that is apparently unutilized, and also by the lavish use of that which is available. He remarks on the immense volumes of water which pass away especially by the Cauvery; and though the wants of the districts nearer the sea that depend on this supply are dismissed somewhat too lightly, his impression is on the whole a correct one; and projects are not wanting for utilizing the surplus water that comes down from the hills. At present attention may be more profitably paid to the other point mooted by the Superintendent, who describes, ~~apparently from personal observation,~~ the practice followed by the cultivator in irrigating paddy lands. His calculations as to the quantity of water used are considered excessive by the Board, but be this as it may there is a very general opinion among those more immediately connected with irrigation that water is used by the cultivator with quite unnecessary lavishness. Further experiment is needed to set the question at rest; and in the meantime the practice followed is not without advantage, for all agree that the additional silt deposited by constant fresh supplies of water maintains the land in a state of unimpaired productiveness, and no interference seems required except, as at present, to secure the fair distribution of the water.

How large is the quantity of silt brought down by the rivers after rain is conclusively shown by the experiment made with water taken on two different occasions from the Calingaroyen channel that is supplied by the Bowani river, and the Superintendent's reasons for considering that the good effects unquestionably produced on the soil by irrigation are mainly due to the silt and not to the properties of the water seem well established.

4. *Lands irrigated from Wells.*—Wells are as a rule excavated at the cost of the cultivator; and to this fact Mr. Robertson attributes the greater economy which he believes he can trace in the use of water obtained from this source. The lesser quantity of water used may however not improbably be connected with the crops raised on these lands which do not apparently include paddy. Here also Mr. Robertson holds that the supply is larger than would be required if more manure were used, and the experiments made at the farm seem to show that in the case of some classes of soil at all events the addition of organic matter would have the effect imagined.

5. According to Mr. Robertson's calculations, the extent of land under well irrigation is already nearly* double that irrigated from tanks and rivers; but it is capable of almost indefinite extension; and having in view the varied and useful nature of the crops grown and the skill that is even now shown in their cultivation, the enterprise deserves every encouragement.

* 88,622 and 150,000.

The ryot has now the inducement of knowing that if he thus improves his holding he will not on this account be called upon for any additional assessment, but he

is no doubt heavily weighted by the uncertainty and expense attending well sinking. It is possible that assistance might be rendered by the Government undertaking trial borings as suggested by Mr. Robertson, and the Chief Engineer for Irrigation will be asked to advise on this point.

In the meantime the Government wish every success to Mr. Robertson's endeavors to promote a better use of the wells now existing, and they are glad to learn that the water-lift recommended by him is in use in the Coimbatore Municipality where it can be seen by the cultivators of the district.

6. The Superintendent speaks favorably of the wheat grown in the Coimbatore District under wells, and suggest its production being stimulated and fresh seed being introduced. The Board are of opinion that wheat is not a remunerative crop in South India, but as the development of the trade in wheat has recently been urged by the Secretray of State, steps should be taken to carry out Mr. Robertson's suggestion.

7. *Unirrigated lands.*—The method of cultivation ordinarily followed on dry lands is condemned by Mr. Robertson as unintelligent and inherently vicious. He finds that the average rate of assessment has fallen considerably during the last eighteen years, and believes this proves that the large amount of waste land taken up is of inferior description. He deduces from this the rapid growth of a population of pauper cultivators, which he regards with alarm. The quality of waste land cannot be safely inferred from the low rate of assessment attached to it under a less exact system, and the way in which fresh land has been gradually taken up shows that it has been found profitable to the cultivator. At the same time recent experience has unhappily demonstrated the truth of Mr. Robertson's remarks as to the general poverty of the holders of dry lands, and any remedy that can be suggested deserves consideration. That pointed out here is an improvement in the agricultural practice, which would make the land yield more in ordinary years and enable it to some extent to withstand drought.

8. The chief thing wanting is said to be manure. Elsewhere in the report the non-use of manure is attributed in part to the apathy of the ryot; but here Mr. Robertson gives reasons for considering that enough stock for manuring purposes is not and cannot be kept. He shows that, while the waste lands formerly available for grazing are being curtailed, no corresponding improvement is attempted in the so-called grass lands kept for feeding cattle, to enable them to support the necessary stock. The Board are apparently of opinion that the existing waste lands still afford ample grazing; and from the available statistics they are disinclined to believe that the live stock for manure has fallen behind the area of cultivation. The importance of the subject is so great that it is desirable further information should be obtained, and the Collector should be required to report on it fully in connection with the complaint regarding the grass lands that has already* been referred to him.

* Board's Proceedings, dated 2nd December 1876, No. 3,044.

9. *Live Stock.*—To insufficiency of pasture the ryots attribute a grievous degeneration of their cattle and horses. They spoke "with pride of a period twenty or thirty years ago when they possessed fine breeds of cattle and horses;" but Mr. Robertson himself met with only undersized horses and ponies with nothing to recommend them; and among several hundred head of cattle at Kongiem only saw "perhaps a dozen animals" that "afforded evidence of the qualities of the breed." This degeneration he fully believes in as a necesssary consequence of the mismanagement of the grass lands. He states that the ryots know nothing whatever about raising grasses from seed, and they will no doubt have much to learn in this respect as the question comes to be forced upon them by the growing value of land for cultivation purposes; but the Government hope that by that time the theory of an improved agricultural practice will be more widely known among them through the agencies now at work.

10. Mr. Robertson is inclined to think that mule breeding might be profitably undertaken, and it will be referred to the Commissariat Department and the Remount

circumstances, but the

Agent for consideration, whether useful experiment might not be made at Hoonsoor or Oossoor both in mule breeding and the improvement of the once famed Kongiem cattle.

11. In paragraphs 198—200 the Superintendent remarks on the present price of salt as prohibitive of its use for stock or as manure. This matter has long engaged the attention of the Government and will not be lost sight of, as they consider it essential that some provision be made to meet the want.

12. *The Ryot.*—In common with other observers, Mr. Robertson has been deeply impressed with the state of indebtedness prevalent among the cultivators. It is believed that recent legislation has improved the position of the burdened ryot together with that of other debtors; but the Advocate-General and Government Pleader will be requested to favor the Government with their remarks on paragraph 189 of the Superintendent's report.

13. *The Government Farms.* Owing to the extraordinary character of the season the field work on the Govern[illegible] farm was carried on under very adverse circumstances; but the results are re[illegible] of useful experiments made with various indigenous crops and with seed imp[illegible] from Australia. The experience gained by several years' cultivation of New Orleans cotton is likely to prove very valuable, and the Government await with interest the result of the attempt that is to be made to induce the plant to alter its bearing season.

14. The qualities of the buffalo grass, as described in the extracts from Australian and American sources, render it probable that it could with advantage be planted on canal banks in this country; and the experience gained in its further cultivation should be carefully noted for communication to the Public Works Department.

15. The Government gather from Mr. Robertson's remarks on the [illegible] subsoil drained land that he is satisfied with the result of the experiment; and as it has now been some years under trial they desire to be furnished with a full and detailed report as ordered in G.O., 3rd November 1874, No. 1,391. The conditions under which it was undertaken and prosecuted, the results obtained, and the reasons for supposing it a success should be fully detailed.

16. The Government have read with much interest the account of the examination made of the properties of different soils and the careful experiments made to determine their power to absorb and retain moisture. The effect of the addition of organic matter was specially remarkable in the case of the sandy soils where, by the addition of 5 per cent. organic matter, 10 per cent. more moisture was absorbed.

17. The experiments made to ascertain the depths at which seeds germinate most readily are likely to be of much practical importance, and should be persevered with under varying conditions of soil and cultivation.

18. The Superintendent's remarks as to the necessity of importing good bulls from Europe and Australia, if improvement is to be effected in the milk-producing powers of the Native cattle, will receive the attention of the Board in connection with the stock farm now being established.

19. The thanks of Government are due to the Superintendent and other Farm officers for their careful conduct of the year's operations.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government

To the Board of Revenue.
" Public Works Department.
" Remount Agent.
" Commissary-General.
" Government Solicitor.
" Government Pleader.

Exd. W. J. Lewis.

Revenue Deptt

Proceedings of the Madras Government

Under date the October 1877.

Read Proceedings

of the Board of Revenue

dated 26 July 1877 No 3,490,

reviewing and submitting

Annual Report of Superinten-

dent of Govt. Farms for 1876-7.

Owing to the

extraordinary character of

the season the field work

on the Govt. farm was

carried on under very adverse

circumstances, but the

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its bearing season.

The

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4. The experiments

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5 The Superintendent's remarks as to the necessity of importing food bulls from Europe and Australia if improvement is to be effected in the milk producing power of the native cattle, will receive the attention of the Board in connection with the Stock Farm now being

Established

Established

G.O.
Report on Govt.
Farms - 1875-76

Revenue Department

Memo for Orders

On the Rec. of the Bd. of 27th Sept. Govt. Farms Report 1875-76
— Boards Proceedings dated 28th
September 1877 No 2583-3 submitting
explanation from Superintendent Govt.
Farms regarding his tour in Coimbatore
District.

"With the earlier of
these Proceedings the Board
forward the annual report
on the Government Farms for
1875-76, in which under the
heading "General" is included
a very full account of a tour
made by the Superintendent
through the Coimbatore District
in the early part of 1876.

The Board's remarks
are confined to this portion
of the report, and as they see
reason to differ from many
of the conclusions arrived at
by

by Mr. Robertson, a discussion has arisen, which is very inconvenient when raised in connection with an administration report.

It is submitted that in future Mr. Robertson's detailed report of his tours might more usefully be submitted in a separate form.

2. In the earlier paras of his report the Superintendent remarks on the general appearance and state of the country, and there does not appear to be any point calling for special notice. Paras 21-45 deal with ordinary irrigated

irrigated lands, and it is stated that there is a great waste of water. Certain calculations are advanced in support of this view; but the Board consider there is some exaggeration. It is believed that Mr. Robertson's views are very generally shared by the officers of the Irrigation Department but further experiment is needed to settle the matter at rest. In the meantime all agree that the additional silt deposited by constant fresh supplies of water maintains

the land
mountains it in a state
of unimpaired productive-
ness; and no enterference
seems required except, as
at present, to secure the
fair distribution of the
water.

The immense quantity
of silt brought down by
the rivers after rain, is
conclusively shown by
an interesting experiment
made with water taken
on two different occasions
from the Coimbatore
channel.

3. The cultivation of the
lands irrigated from
wells

wells, which are constructed
at the cost of the cultivator
meets generally with Mr.
Robertson's approval, but
he points out that the un-
certainty & expense attending
the sinking of wells stand
sadly in the way of their
extension. He suggests
trial borings being made by
Government, and the Board
think assistance might
be rendered in this direction.

This point, may it is
presumed, be referred for
consideration in the Public
Works Department. The water
lift recommended by Mr.
Robertson is in use in the
Coimbatore Municipality
and will doubtless soon
command

commend itself to the cultivators if really suited to their requirements.

4. The Superintendent speaks favorably of the wheat growing in the Coimbatore District under ~~irrig~~, and suggests its production being stimulated and fresh seed being introduced.

He is of opinion that there is a considerable demand for it at remunerative prices while the Board state summarily that wheat is not a remunerative crop in South India.

The increasing demand in England for Indian wheat seems to favor the Supt.to's views, and as the development of the trade in wheat has recently been urged by the Secretary of State, his suggestion may, it is presumed, be approved

The

G.O. 4th April 1877 No 1318
22d Sept 1877 No 2825

5.

The points on which the Board mainly join issue with the Supt. of Farms are, his statements that the area of lands used as pasture is decreasing and that unirrigated land has diminished in productiveness to a very alarming extent.

On the latter point there is, as the Board remark, an entire absence of evidence. The ryots state so, and Mr. Robertson thinks it probable because he believes that sufficient stock cannot be kept. This belief the Board consider to be founded on a misconception, and they produce returns to show that it is not the case that either fallow pasture, or unirrigated

for

× para: 14.

° For manuring purposes.

for manure has fallen behind the area of cultivation." In his recent letter Mr. Robertson points out that the Board's figures do not affect his argument which was based on the large extent of waste land, which has of late years been taken up and has thus proportionately reduced the common land available for grazing purposes.

6. To insufficiency of pasture the ryots attribute a diminution of the live stock which it will be seen from the above the Board do not believe in, and also a degeneration which they do not directly notice.

The ryots spoke to Mr. Robertson with pride of a period

Para: 151a

Para: 165

Para: 150

* Para: 149

period 20 or 30 years ago when they possessed fine breeds of cattle and horses, "but Mr. Robertson himself met with only undersized horses and ponies with nothing to recommend them; and among several hundred head of cattle at Kongiem he only saw "perhaps a dozen animals" that "afforded evidence of the qualities of the breed." 7. The evils arising as he believes from insufficiency of pasture must be added in Mr. Robertson's opinion those due to the mismanagement of the existing grass lands. He states that the ryots know nothing whatever about raising grass from seed, and they will no doubt have much to learn in this respect when cultivation comes to be forced upon them

them by the growing value of land for cultivation purposes. It may be hoped that by that time the theory of an improved agricultural practice will be more widely known among them, through the agencies now at work; and in the meantime the Board have called upon the Collector for a report on the ryots complaints in the matter of grass lands.

It is suggested that his report might also include the result of inquiries to be made as to the alleged deterioration and diminution of live stock.

8. In paras: 198-200 Mr. Robertson remarks on the present price of salt & prohibitive

of

* Bds Proc: 2nd Dec 1876 No.

12. The Ryot

Paras: 113-116 & 206-7

Para: 41-2-113-187-8.

Para: 201-202.

Para 187

of its use for stock as manure. It is believed that this matter has long engaged the attention of the Govt: but in the present state of the salt question no measures for lightening the burden can, it is presumed, be adopted.

9. To the low state of agricultural practice Mr. Robertson attributes the pressure in seasons of drought. This inferior cultivation he considers, mainly from the poverty of the actual cultivator, but he also charges him with indolence and ignorance. The poverty of the ryot he traces to the increase of population and decreased productiveness

productiveness of irrigated lands & notices the state of indebtedness prevalent among the cultivators, and like other reformers would seek a remedy in legislation

10. The cultivator Mr. Robertson considers shows indolence in not using manure, as its cost consists chiefly of expenditure or labor in collecting and bringing it to the land.

Para: 187

"The cultivators occupy irrigated land are generally very poor, the majority of them are deeply in debt."

Para: 356.

157 The State in his view should take the place of the landlord in England and compel its tenants to manure the land and to grow restorative crops.

It is presumed that it is unnecessary to notice Mr.

Mr. Robertson's views on these matters or to follow the Board in their discussion of the various economic theories which seem to support or controvert his arguments.

11. A draft G.O. on that part of the report that deals with the operations on the Govt. Farms is submitted for approval.

Ed. Fl.

Memo for Bd

Report on Govt

Farms - 1875-7

Govt

C. 8: Govt by R 16-11-77

C. 10: Govt by R. 1-Dec by R

Rev. Dept.

No 3255

Proceedings of the Madras Government

Under date the 16 November 1877.

Read the following Revs

of the Board of Rev dd 26 July 177

No 3490 forwarding Farm Report for 1876-7

& No 4548 dd 28 Sept 1877 submitting Farm

Supts explanation regarding his tour

in Coimbatore District.

With the earlier of

these Proceedings the Board

forward the annual report

on the Government Farms for

1875-76, in which, under the

heading "General" is included

a very full account of a tour

made by the Superintendent

through the Coimbatore District,

in the early part of 1876.

The Boards remarks

are

are confined to this portion of the report, and as they see reason to differ from many of the conclusions arrived at by Mr. Robertson, a discussion has arisen, which is very inconvenient when raised in connection with an administration report.

These detailed reports of Mr Robertson's tours will be more useful if submitted as a separate form through the Collector of the District whose local knowledge will generally enable him to explain and elucidate things that perplex a stranger or strike him unfavorably or on

which

3245
57

15

3245
57

which he has been incorrectly informed. This arrangement will also enable Mr. Robertson to submit his Administration Report at an earlier date. The Govt. have on previous occasions pointed out that the value of these reports is much lessened by their late receipt.

2. The Government desire at the outset to express their appreciation of the careful and exhaustive nature of the Supts report. They are fully alive to the advantage of being placed in possession of the impressions made by the general appearance of

the

are
the country, the villages, & the
of the people on a thoroughly ca-
see pable observer, and if they
of— do not specifically notice
by. has many of the subjects touche
coincidence it is because they can
could be more appropriately deal
tac with at another time.

of 3. Land irrigated from
for a rivers and tanks. — Mr. Robertson
in was much impressed by
the the amount of water that is
wh apparently unutilized, and
gen also by the lavish use of
ex that which is available.
that He remarks on the immense
str volumes of water which flow

away

away, especially by the Cauvery
and although the wants of the
Districts nearer the sea that
depend on this supply are
discussed somewhat too lightly
his impression is on the
whole a correct one, and
projects are not wanting
for utilizing the surplus
water that comes down
from the hills. At present
attention may be more pro-
fitably paid to the other
point insisted by the Insp.
who describes, apparently
from personal observation, the
practice followed by the

Cultivator

a cultivator in irrigating paddy
lands. His calculations as to
the quantity of water used
are considered excessive by
the Board but, be this as
it may, there is a very general
opinion among those more
immediately connected with
irrigation that water is used
by the cultivator with quite
unnecessary lavishness. Fur-
ther experiment is needed to
set the question at rest, and
in the meantime the practice
followed is not without ad-
vantage for all agree that the
additional silt deposited
by constant fresh supplies of
water, maintains the land
in a state of unimpaired
productiveness, and no under-
ground drains required as yet,
as at present, to secure the
fair distribution of the water.

How large is the quantity
of silt brought down by the
rivers after rains, is conclu-
sively shown by the experiments
made with water taken on
two different occasions from
the Cabingaroyen Channel
that is supplied by the
Bovanie river, and the
subjoined reasons for considering
that the good effects

3265/100

3265/100

a unquestionably produced on
of the soil by irrigation are mainly
ly due to the silt and cert
of the properties of the water
been well established.

4. Lands irrigated from wells: Wells are as a rule excavated at the cost of the cultivator; and to this fact Mr. Robertson attributes the greater economy which he believes he can trace in the use of water obtained from this source. The lesser quantity of water need may however not probably be connected with the crops raised on these lands which do not apparently include paddy. Here also Mr. Robertson

Robertson holds that the supply is larger than would be required, if no more manure were used, and the experiments made at the Farm seem to show that in the case of some classes of soil at all events, the addition of organic matter would have the effect imagined.

5. According to Mr. Robertson's calculations, the extent of land under well-irrigation is already nearly double that irrigated from tanks and rivers, but it

× 88,622 : 150,000

is capable of almost indefinite extension and leaving
out of view the varied and woeful
nature of the crops grown &
the skill that is every now
shown in their cultivation
the enterprise deserves every
encouragement.

The ryot has now the
inducement of knowing
that if he does improve his
holding, he will not be
called upon for any
additional assessment.
But he is no doubt heavily
weighted

weighted by the uncertainty
and expense attending well
sinking. It is possible that
assistance might be afforded
by the Govt. undertaking, as
suggested by Mr. Robertson
and the Chief Engineer for
Irrigation, will be asked
to advise on this point.

In the meantime the
Govt. will wish every success
to Mr. Robertson's endeavours to
promote a better use of the
wells now existing, and
they are glad to learn that
the waterlift recommended
by

by him is in use in the Coimbatore Municipality where it can be seen by the cultivators of the District.

The Supdt. speaks favourably of the wheat grown in the Coimbatore District under wells; and suggests its production being stimulated and fresh seed being introduced. The Board are of opinion that wheat is not a remunerative crop in South India but as the development of the trade in wheat has recently been urged by the Govt. of India, steps should be taken to carry out Mr. Robertson's suggestion

Unirrigated

7. Unirrigated Lands.

The method of cultivation ordinarily followed on dry lands is condemned by Mr. Robertson as unintelligent and inherently pernicious. He finds that the average rate of assessment has fallen considerably during the last eighteen years and believes this proves that the large amount of waste land

land taken up is of
inferior description. He
deduces from this the rapid
growth of a population
by haupen cultivators,
which he regards with alarm.
The quality of waste land
cannot be safely inferred
from the low rate of
assessment attached to it
under a less exact system,
and the way in which
fresh land has been
gradually

gradually taken up shows
that it has been found
profitable to the cultivator.
At the same time recent
experience has unhappily
demonstrated the truth
of Mr Robertson's remarks
as to the general poverty of
the holders of dry lands;
and any remedy that can
be suggested deserves consider-
-ation. That pointed out
here is an improvement in
the

the agricultural practice

which would make the

land yield more in ordinary years

and enable it, to some

extent to withstand drought.

8. The chief thing wanting

is said to be manure.

Elsewhere in the report

the nonuse of manure is

attributed in part to the

apathy of the ryot: but here

Mr

Mr Robertson gives

reasons for considering that

enough stock for manuring

purposes is not and cannot

be kept. He shows

that while the waste lands

formerly available for

grazing are being curtail-

=ed, no corresponding im-

=provement is attempted

in the so-called grass lands

kept for feeding cattle, to

enable them to support

the

necessary stock: The Board are apparently of opinion that the existing waste lands still afford ample grazing and from the available statistics they are disinclined to believe that the live-stock for manure has fallen behind the area of cultivation. The importance of the subject is so great that it is necessary further information should be obtained, and the Collector should be required to report on it fully in connection with the complaint regarding the grass lands that has already been referred to him.

Live

* Bd. Proc. 2 Dec. 76 No 3044.

9. Live Stock. To insufficiency of pasture the ryots attribute a grievous degeneration of their cattle and horses. They spoke with pride of a period 20 or 30 years ago when they possessed fine breeds of cattle and horses: but Mr Robertson himself met with only undersized horses and ponies with nothing to recommend them; and among several hundred head of cattle at Kongeiry only saw "perhaps a dozen animals" that "afforded evidence of the qualities of the breed". This degeneration he fully believes in as a necessary consequence of the mismanagement of the

the grass lands. He states that the ryots know nothing whatever about raising grasses from seed, and they will no doubt have much to learn in this respect, as the question comes to be forced upon them by the growing value of land for cultivation purposes; but the Government hope that by that time the theory of an improved agricultural practice will be more widely known among them, through the Agencies now at work.

10 Mr Robertson is inclined to think that mule breeding might be profitably undertaken, and it will be referred to the Commissariat Department and the Remount Agent for consideration, as neither to him.

whether useful experiment might not be made at Hoonsoor or Ogsoor both in mule breeding and the improvement of the once famed Kongieum Cattle

11 In paras 198–200 the Superintendent remarks on the present price of Salt as prohibitive of its use for stock or as manure. This matter has long engaged the attention of the Government and will be lost sight of, as they consider it essential that some provision be made to meet the want.

12 The Ryot — In common with other observers, Mr Robertson has

has been deeply impressed
with the state of
indebtedness prevalent
among the cultivators.
It is believed that recent
legislation has improved
the position of the burden
not together with that
of other debtors; but the
Advocate General and
Government Pleader
will be requested to favor
the Government with
their remarks on
para 189 of the
Superintendents report

The

13

The Government farms

Owing to the extraordinary
character of the season, the field
work on the Government farms
was carried on under very ad-
verse circumstances, but the
results are regarded of useful
experiments made with various
indigenous crops, and with seed
imported from Australia. The
experience gained by several
years cultivation of Sea Island
Cotton, is likely to prove very
valuable; and the Government
will await, with interest, the
result of the attempt that is to be
made to induce the plant to
alter its bearing season.

The

14. The qualities of the

best subsoils, as described

in the Survey Reports, as

Indian and American Lands,

render it probable that it could

with advantage be planted

on Canal banks in this country,

and the experience gained in

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munication to the Public

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The Govt. gather from

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subsoil ploughed land that he is

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The effect of the addition of

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19. The thanks of
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and other Farm officers
for their careful
conduct of the
year's operations.

Lal

14 Tel. Dept 22-11-77
21 " P. W. Dept Report 23-12-77
7 " Military Dept
4 " Govt Printer
3 " Govt Gazette

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Report on Geol[illegible]
1875-76 and
tour thro Cumb[illegible]