

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	1554	Press
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Dated	6-11-	19-1863

Not to be folded or roughly handled

Read the following Minutes:—

No. 63. MINUTE BY THE HONORABLE THE PRESIDENT.

1. During my absence from Madras I have travelled, in various directions, through much of Mysore; I have visited the Districts of Bellary and Kurnool, and have resided for some time in the higher part of the Salem District. The whole of the country which I have visited is under, what are termed, dry crops. Of course advantage is taken of every opportunity of collecting the drainage of the country into tanks, and the water, thus stopped in its progress to the sea, is utilized to the utmost extent; still, however, by far the largest portion of Mysore, and of the other Districts named, is dependent upon the rains for the moisture required for the crops. In fact, the character of the dry cultivation is analogous to that of England, with, however, this marked difference, that while in England, as a general rule, farming operations can be carried on throughout the year, with only the occasional interruption caused by excess of moisture, in these Districts the rain is periodical, being the product of the two monsoons, and may last for five or six months, and during these wet months the whole work of the farm must be completed, the dry months from January to May putting a stop to all operations upon the baked and burned up surface, with the exception of a few detached fields, where advantage, is taken of the casual showers which fall generally about April.

2. The time for farming operations being thus limited, it is a matter of importance that the work should be performed as speedily as possible, that each process should be got over with the utmost rapidity compatible with efficiency; the tools and implements should, therefore, be as effective as possible, regard of course being had to the power at the disposal of the farmer, and no loss of time or of labor should be allowed. The actual state of things, so far as they came under my observation, was widely different from this.

3. The ground being left untouched during the dry season, the weeds have ample time to seed and to develop themselves, and the ground is well covered with a variety of trash, among which a species of couch grass is the commonest, and the most obstinate in resisting removal.

4. The first ploughing, having for its object the clearance of the soil from weeds, is performed with such an indifferent tool as to produce but little effect; it does indeed but scratch the surface, and of course must leave much of the roots of the couch grass in the ground. As this ploughing is ineffective, it has to be repeated several times, while women and children follow the plough for the purpose of picking up the loose weeds.

5. The ground being prepared by frequent ploughings, the seed is sown by a species of drill (I am speaking now more particularly of Raghi, which is the principal crop in this part of Salem and in Mysore); too little attention, however, has been paid to the petty arrangements of this drill, so that much seed is wasted by being sown too thickly. A bush harrow is used to cover the seed, and does its work effectually.

6. When the plant makes its appearance above ground, it comes up much too thick, and it is necessary to cross hoe it with a kind of heavy rake, worked by bullocks, and having four teeth. This operation serves two purposes, it loosens the ground, and by thinning the drills, leaves the plants room to grow. The distance between the drills in Raghi is from 5 to 6 inches, and under the system above detailed it grows, under favourable circumstances as to moisture, strong and healthy.

7. The Native, however, is not contented with one or even two strings to his bow; having sown the Raghi he proceeds to insert the seeds of various other plants in rows at distances of about 3½ or 4 feet apart; that is, about every eighth drill of Raghi has other plants, interpolated, and I have seen in one field as many as five different kinds of plants; Raghi being the staple, Mustard is found growing irregularly, then in the drills there are varieties of Beans which are pressed for oil; then a variety of Cholum or Millet is found, and not unfrequently plants of Castor Oil; in some Districts Cotton is planted in this way. All these come to maturity at different times, and of course the ground must not only be gone over in reaping as many times as there are kinds of

plants, but each crop must be reaped more slowly and carefully in order to avoid injuring the standing plants. To proceed, however, regularly: after these various plants have made their appearance, and been thinned out by the hoe as beforementioned, a body of weederers is turned into the field; this is necessary, for the ground, being very foul when the seed was sown, notwithstanding the many ploughings it has received, the weeds would choke the crop unless they were kept down by the hand, and this process of hand weeding is a part of the annual labour bestowed upon the crop.

8. When the crop is ready for reaping, the Raghi is reaped with a short sickle. Some of the beans are pulled up by the roots, and other crops are disposed of in different ways. In some cases the threshing is done in the field, in other cases the crop is stacked. I have, however, in a former Minute alluded to the rudeness of the process of threshing, and cleaning the grain. My object now is to bring under the notice of the Government the slovenly character of the cultivation, and to point out the steps which it might be advisable to take with the view of bringing about, *gradually*, a more wholesome state of things.

9. That any change for the better must be gradual, is very certain; for the different processes dovetail into each other, and are so dependent upon the power which the Ryot can dispose of, while this power is in direct relation to the climate, that no sudden change can be expected. It would, however, be very absurd were those, who are in a position to suggest and carry out some kind of remedial action, to sit down with such a set of evils staring them in the face, and assume them to be irremediable. I will, therefore, try whether I cannot suggest a aspect and produce of the country. Before, however, I allude to the remedies, I will give a list of some of the evils and of their possible causes.

No. 1.—The ground is cropped continuously, and but lightly manured; much of the manure being consumed as fuel, owing, in great measure, to the absence of wood. Nothing can be more bare of trees than the whole of the tract through which I have passed.

No. 2.—The ground is badly cultivated, or prepared for the crop, owing, first, to the want of weight and power in the animals used for draught; and secondly, to the poor and inefficient character of the tools used.

No. 3.—The mode of cropping a field with various sorts of plants is very objectionable.

10. The first step towards increasing the quantity of manure would be to provide the population with a better description of fuel. The loss of labor in bringing in the small amount of wood now consumed, and of preparing the cow-dung is enormous.

11. Some arrangement might be made for planting a portion of the waste land of each village with Casuarinas, or other trees. I mention Casuarinas, for these seem to grow equally well at Madras, in the low country on a level with the sea, on the Mysore plateau 3,000 feet above the sea, and on the Neilgherries 3,000 feet higher still: it would seem to be a tree very well suited to the climate, and being indigenous, or thoroughly acclimatized, there could be no difficulty in propagating it to any extent from seed. It is a tree which grows rapidly, does not cast much shade and would not therefore do much injury to crops growing near it; besides all this, it furnishes the very best kind of firewood. In Australia an extra price was always paid for She Oak, as the Casuarina was there called. It might also be as well to use trees for the boundary marks of the different holdings, the present stones, or mounds of earth, are of too slight a character to be maintained for any time; whereas a tree is a lasting mark, which the owners of the land would be induced to maintain by the promise of being allowed to make use of it on condition of planting another in its place.

12. The effect of planting upon the climate cannot but be beneficial, and it would be well worth the consideration of the Government whether it might not be advisable to provide nurseries of such plants as might be best suited to each District, at all the stations where there is an officer who could be trusted to look after them; the cost would be very trifling, and the

young trees might be given to the Natives upon the sole condition of planting them. With a large supply of firewood the necessity of employing cow-dung for fuel would cease, and this would be turned to its proper use as manure; the labor of manipulating and bringing this into the form of small cakes would be saved, and the cost of collecting it would not be more than at present. Changes, however, such as this require time, but this would seem to be a good reason for anticipating the results, and for taking the necessary steps to secure them with as little delay as possible.

13. More immediate results will follow from the improvement of cultivation.

14. The first cause of bad cultivation, viz., the want of weight and power in the animals employed for draught can only be remedied very gradually. As manure becomes of more importance, more care will be taken of the stock; they will be kept nearer the homestead, fed better and will gradually increase in size and capability of working. A good effect has been produced in Nellore by the annual exhibition of stock, and by giving prizes for the best animals. A similar course should be followed in other districts, as soon as the Revenue authorities think that a beneficial effect is likely to result from it.

15. More immediate effects would be produced by the introduction of better implements. The native plough is a light, cheap article, but it can do little but scratch the ground; the horse hoe to which I have alluded before, is but a heavy rake. I have seen no harrow, but a bush is used to cover the seed when sown. A good, light and *cheap* plough, proportioned to the power of the bullocks which have to draw it, and which would turn a furrow deep enough to expose the roots of the couch grass, would be a very valuable implement. One good ploughing with this, and an after-harrowing with a proper harrow, would save the Ryot the numerous ploughings with which he prepares his land. In a report upon the cultivation of different crops in the Godavery District I find it stated, that, in a sandy loam, the ground is ploughed for Cholum (a species of Millet) twice in June, and then once in every fifteen days till September, that is the ground is gone over six times. Again for Cumboo (*Panicum spicatum*) the ground is ploughed twice every six days for three weeks; and for Cotton it is said that the ground is ploughed twice in June, twice in July, this process being repeated in September and October.

16. Now, all these ploughings are more for the purpose of cleaning the ground and keeping the weeds down than as a preparation for the crop. They occupy, however, the time of men and cattle; increase the number of the latter which the Ryot must keep, and add unnecessarily to the cost of cultivation. I am very much disposed to believe that one good ploughing and harrowing at the commencement of the season, and another as a preparation for the crops would answer every purpose.

17. The plough which would, I think, be found best suited to the country would be a light one with wheels, capable of being worked by a pair of light bullocks; the wheels would keep the untrained bullocks in the furrow, and lighten the labor of the man between the stilts.

18. The third evil to which I have alluded is that of growing a variety of crops intermixed with each other. This though carried out with some regularity, inasmuch as most of the extra plants occupy the drills, is yet productive of great loss of labor, to say nothing of the loss arising out of the action of the plants on each other. The Castor Oil plant, for instance, grows up to be a shrub, and must affect in various ways the growth of the ordinary crop in its neighbourhood. Cotton too is a spreading shrub. Irrespective, however, of the loss occasioned by the action of the different plants on each other, the additional cost of going over the ground four or five times instead of once is by no means trifling, while a stop is put altogether to the introduction of the scythe in place of the reaping hook.

19. The following account of an experiment lately made by Colonel Thompson, the Remount Agent at Oosoor, will give practical evidence of the extra expenditure in gathering in the crops resulting from the use of the reaping hook, which, however, so long as mixed crops are grown in the

same field must be employed for that purpose. In a meadow, carrying a heavy crop of Doab or Hurreala grass, two equal strips of land were marked off; to one of these an Englishman with a scythe was allotted, while alongside of the other twenty-two women, each with a small reaping hook, were posted. These latter were encouraged to do their best by the promise of a Rupee in addition to their ordinary wages. At a given signal both parties commenced to work, and the women in consequence of the extra stimulus applied, won the race. On looking over the land it was evident that the man would have beaten sixteen women, even under the excitement of the stimulus, and I believe that, at the ordinary rate of working, the scythe would go over as much ground in a day as twenty men, or rather women, would go over with the reaping hook. If then a Native, who by the way is very quick in learning the mode of handling these implements, be considered to be physically equal to half an European, and if he is rewarded for his intelligence in learning the use of a scythe by the receipt of double wages, he would in fact do the work of ten labourers, receiving the payment of two, and a saving of eight workers would be made.

20. From what I have mentioned above as the result of the cursory observations made by me during the last few months, it is evident that great improvements might be made in carrying out the commonest agricultural processes. I think, too, that better implements, if properly adapted to the circumstances of the country, and the means and powers of the people, would soon save their cost by the saving of labor which would result from employing them.

21. The mere importation of implements, however, or their exhibition at an agricultural show, will not be sufficient to induce the Natives to purchase or use them; they will naturally require to see the implement, whatever it may be, fairly at work; to be able to criticise its performances, and to compare these with the work of their own tools. The Government then should be not only in a position to exhibit the working of the different implements, but it should show them worked by Natives, so that no doubt should exist as to the power of these latter to employ them beneficially.

22. Luckily the Government has an establishment at Oosoor which offers all these advantages. There is already a farm of about 240 Acres attached to the Remount Establishment, and it has been proposed to add to this 150 or 200 Acres, so as to give to the Remount Agent the means of making a profitable use of the power he has at his disposal, by raising produce of different kinds, either for the food of his horses or for sale.

23. There is at the establishment a fair proportion of the different kinds of soil; the upland is similar to the great mass of the land in Mysore, a red sandy loam; while in the bottom there are some acres of irrigated land. On this farm, therefore, experiments might be made with most if not with all of the new implements sent out, with the certainty that every really good tool is not only paying its cost in diminishing the expense of cultivation, and enhancing the produce of the farm, but that it is making its way in the estimation of the people, and will be the parent of many contingent benefits to the Government which introduces it.

24. Natives, in certain numbers might be permitted to attend at the Dépôt, not merely for the purpose of examining the tool and witnessing its action, but to learn the mode of employing it. The number of these pupils must of course be limited, but the instructions to the Remount Agent would be to the effect that the object of the Government would be best gained by the wide diffusion among the Natives of the knowledge of the mode of using the tool. It would also be as well that, at the two periods of seed time and harvest, when the farm work is in full operation, a sort of exhibition should take place. A ploughing match might be held about June or July, and some trifling prizes given to the best Native ploughmen. While at or about Christmas the various reaping and threshing machines might be exhibited in action, and eventually, such improved machinery for oil pressing, &c., &c., as might be adapted to the power available, might be exhibited, and compared, as to their results, with the existing Native machines.

25. Looking upon this Minute as supplemental to my former one on the introduction of machinery, I should wish to add the following to the list of implements and machines therein contained:—

- (1.) 6 *Light* Ploughs with wheels.
- (2.) 1 Read's sub-soil Plough.
- (3.) 6 Sets Harrows, wooden, Rhomboidal.
- (4.) 1 Horse Hoe.
- (5.) 1 Do. expanding.
- (6.) 1 Slight's improved Drill prepared for sowing seeds of different sizes, from Mustard up to Wheat.
- (7.) 30 Scythes for short people and light weight.
- (8.) 12 Hay Rakes, wooden, American.
- (9.) 1 Horse Rake.
- (10.) 1 Good one-horse Cart.
- (11.) 1 Reaping Machine.

26. These would be fair specimens of the class of tools and implements for which use might be found on the farm at Oosoor, and modifications of these in material easily procurable in India, might be soon manufactured here by Native workmen. What we ought to seek to impress on the Native mind is the principle or the idea. When once this is fairly engrafted, it will soon grow and produce the required fruit.

27. There is one subject in connection with those discussed in this Minute, to which I wish to direct the special attention of the Government. It forms part, it is true, of a general question, but may, with advantage, be dealt with separately, and form a suitable introduction to the remainder. I mean the collection of agricultural statistics.

28. From the nature of our connection with the country we have hitherto either found, or fancied, difficulties in the prosecution of statistical enquiries. I cannot, however, but think that these difficulties are gradually disappearing; even as regards those questions which have a more close relation to the domestic arrangements of the people, I mean those which require a record to be kept of births, deaths, and marriages, would not now be so distasteful as used to be anticipated.

29. The difficulties, however, which impede the collection of a variety of useful agricultural facts, are not greater here than elsewhere. The Government has here far better means of arriving at them, and they are of much greater importance to the Government here than they can be in other parts of the world, where the revenue does not bear so direct a relation to the produce of the soil as it does in India. The field is so wide and the information in our possession so scanty that the sooner a methodical system of collecting, arranging and registering these facts can be established, the better.

30. I see no reason why the Collector in each District should not be called upon to forward a Report annually upon all matters connected, directly or indirectly, with the agriculture of a portion of his District, a Talook for instance, or a portion of a Talook. To ask him for a report upon more than a small portion would but ensure the return of a general sketch of the district, instead of a finished microscopical analysis of a portion; more information, such as that which is required, would be got from an exhaustive report upon one village than from a sketch of a district.

31. The information derived from these reports would be valuable in two ways, it would give to the members of Government a vast mass of facts of which they are at present ignorant, and it would be the means of inducing the Collectors to look closely into many matters to which, as not directly affecting the execution of their duties, they now pay but little attention.

32. A general form might be prepared, noticing the subjects to which attention should be paid, more, however, as a Memorandum for the use of the Officers employed than as a check upon the

introduction of any subsidiary information. I here mention the subjects which immediately occur to me, of course it would be easy to make additions from year to year:—

- (1.) Description of Talook or of village in full detail, physical aspect, number of population, means of communication, &c., &c.
- (2.) Area of cultivation, of cultivable waste, jungle, &c., &c.
- (3.) Character of soil, of sub-soil, quarries, mines, presence of minerals, metals, &c.
- (4.) Quantity of irrigation, mode of increasing this.
- (5.) Quantity of stock, cattle, sheep, donkeys; prices of each; size and weight of cattle, do of sheep, load for each bullock, for each donkey, power of draught, &c., &c.
- (6.) Cultivation, wet and dry crops; mode of cultivation; number of ploughings; state of soil; quantity of seed, quantity of produce, grain straw, length of time in ground, how reaped, how threshed; price, wages of labor, how paid.

These are mere general heads, as soon as the Collector begins to make his enquiries he will be struck with the mode in which subsidiary enquiries interpolate themselves; the more the subject is looked into the more interesting will it become, and a marked difference will be seen between the reports sent in at first, and those which will be the result of three or four years' experience.

33. In order to produce as beneficial effects as possible, a summary of the facts placed before the Government should be drawn up with every attention to the details, and not too much condensed, and printed in the different vernacular languages for general circulation; while the report of each Collector should be published, in full, in the District Gazette. There is one most important preliminary to the collection of statistical information or rather to the comparison of the facts collected, which has already attracted the attention of Government, I mean the improvement of our system of Weights and Measures. Unless these can be simplified, the bare facts will will render them practically useless. I would suggest then that a reference be again made to the Supreme Government, calling its attention to the substance of the recommendation of this Government in the letter dated 13th May 1863, No. 831, and requesting to know whether there is any intention on the part of the Government of India to adopt the suggestion therein contained, or to make any effort to bring about anything in the shape of an uniform system of Weights and Measures. Should the reply be in the negative, the Government may then take up the subject so far as the Madras Presidency is concerned, and do its best to methodize and arrange upon some simple basis the relation between the different Weights and Measures now in use.

1st October 1863.

(Signed) W. T. DENISON.

No. 64. MINUTE BY THE HONORABLE MR. MALTBY.

1. This Minute of the President forms a supplement to his former one on the introduction of machinery, and the implements and machines detailed in paragraph 25 should be added to the list of those for which application has been made to the Secretary of State.

2. In paragraphs 1 to 18 His Excellency comments on the imperfect system of agriculture carried on in those Districts which he has lately visited. The subject is an important one, and has long engaged the attention of Government and its officers. I would refer more especially to the elaborate details collected by Dr. Buchanan in the agricultural tour which he was directed to undertake for the purpose of obtaining information, and the records of the Revenue Board will be found to contain more recent reports from many intelligent officers, which throw much light on the subject.

3. In my opinion the apparently backward state of agriculture arises less from ignorance or from unwillingness to use improved methods than from poverty and the discouragement of small gains. In Districts where a handsome profit is obtainable from the land, as in Cuddapah, Malabar, &c., the agriculture will be found to be of a superior description, and I argue from

this that the surest way of promoting improvement is to render land valuable and attract capital to it, by such methods as fixing a light and permanent assessment, giving security of title, enlarging the means of irrigation and facilitating the conveyance of produce to market towns and ports by improving the communications of the country. In proportion as efficient measures are carried out for making land valuable, the mode of farming will, I am confident, become better, and I should wish to see the chief energies of the Government directed to measures of the above description.

4. In support of my remarks I would point out the readiness with which the people have improved their lands and introduced new products, such as indigo, ground-nut, &c., where the state of the assessment and the power of disposing of their produce permitted them to do so without imprudence. It seems to me also that although poverty often obliges them to conduct farming on a humble scale, they exhibit much aptitude for turning their means to the best account. English commercial houses, for example, seem generally to purchase the produce which they require for their sugar, indigo and other factories, although they have made attempts to grow it for themselves with the appliances of European skill and art.

5. But even should it be conceded that I have pointed out the primary method of advancing the agriculture of the country, I by no means wish to undervalue the means which His Excellency proposes for the same purpose. Improved implements placed by Government, for use as models, in the hands of some of the more enlightened Native land-holders may lead to important results; but they should be tried in our more advanced Districts. Manuals adapted to the climate and soils of this Presidency and explaining the principles of agriculture in simple language, might also produce much benefit when circulated in the native languages. Hints for the cultivation of cotton and indigo have, if I mistake not, been published in this manner.

6. On the subject of statistics, I propose that His Excellency's suggestions be referred to the Revenue Board for their consideration and report. My impression is that statistical details already abound in their records. Elaborate enquiries have been made from time to time by various officers to ascertain the yield of the land and the cost of cultivation. The quinquennial returns show the more important statistics of each Province. All the sources of irrigation are carefully registered in the Public Works Department, and under instructions approved by Government the Survey Land Registers now being prepared will contain a statistical Memoir for each village. The question is attended with some difficulty and requires careful treatment, as attempts to obtain agricultural returns have been found to give the lower Native Revenue servants an opening for interference and exaction.

15th October 1863.

(Signed) E. MALTBY.

No. 65. MINUTE BY THE HONORABLE MR. PYCROFT.

Minute by His Excellency the President, dated 1st October 1863.

1. His Excellency the President in the above interesting Minute has correctly described the present condition of native agriculture generally in this Presidency, and the defects incident to it.

2. Those defects can, as it seems to me, only be remedied gradually as the general improvement of the country proceeds, and as the people become more enlightened. The main remedies are the lowering of the land assessment where unduly high, and placing it on a permanent footing, security of tenure, development of internal communications, roads, canals, tramways and light railways, extension of irrigation, reduction of the interference of subordinate Revenue officials to a minimum, cheaper and more prompt administration of justice, and diffusion of education—every thing in fact which promotes the free action of the cultivator, opens out to him fresh markets, brings him into communication with the European merchant and settler, and by creating a greater and more certain demand for his produce gives him the strongest stimulus to raise it in the best state, and with the utmost economy of time and labor. This has already been

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effected to some extent as respects exports for foreign countries, Indigo, Ground-nut, &c., and the progress is likely to continue.

3. At the same time I see no objection to the immediate agency of Government towards the desired end in the way proposed by His Excellency. The implements which he specifies should be applied for in addition to those in the list already sent home. Agricultural exhibitions should be encouraged, and the improved machines, tools and implements shown in practical operation, and their uses, modes of action and results explained to the assembled Ryots. A model farm in which these several machines and tools should be seen in constant use may also be established, but I would not place it at Ossoor which is on the very frontier of the Madras Presidency, nor under the Remount Agent who, however zealous and intelligent he may be, cannot have that intimate knowledge of the natives, their ways, prejudices, and feelings, which is only to be acquired by long residence in the Provinces, and constant intercourse with the people. I would rather locate it in some central spot on a line of Railway, say at Coimbatore, where it would have the best chance of success under the present able and energetic Collector. If a second farm were required for the Northern Division of the Presidency, I would suggest Cuddapah as the best site.

4. The promotion of the growth of trees is on many accounts an object of first-rate importance. His Excellency's views on this head might be communicated to Captain Beddome, for his suggestions as to the best mode in which they could be practically carried out.

5. Paragraphs 27 to 33 of His Excellency's Minute might be referred to the Board of Revenue for their remarks. I must confess myself averse to adding to the number of reports and returns at present laid before Government, and to throwing more labor on the Collectors, who are over-worked already, but the matter may be considered more fully when we are in possession of the Board's sentiments.

6. The Supreme Government may be requested to favor us with an early answer to our letter of 13th May last, on the adoption of an uniform set of Weights and Measures. I continue of opinion that the simplest and easiest course would be to introduce the English standards, which are now (practically) in use on the Railways and at the Sea Custom Houses. The question however has no doubt been complicated by the late Resolution of the House of Commons in favor of the Decimal system.

24th October 1863.

(Signed) T. PYCROFT.

No. 66.

ORDER THEREON, 6th November 1863, No. 1,994.

1. Resolved that the Minutes above recorded be forwarded to the Home Government with a request that the additional implements, noted in paragraph 25 of His Excellency the President's Minute, may be sent out with those applied for on the 13th July 1863.

2. The Board of Revenue will be instructed to communicate with the Acting Conservator of Forests and the Acting Director of Revenue Settlement on the subject of encouraging the growth of firewood on waste lands. By the existing rules such land is granted free of assessment for twenty years, and the planter is also allowed to cultivate the land in the spaces between the trees, without any charge. At the end of that period, the land assessment only is chargeable. These are liberal terms, but assistance might also be afforded in the way of supplying seeds and young plants, and the importance of not employing valuable manure, as fuel, should be explained to the people.

3. The Board will provide in the Budget of next year as already desired, for agricultural exhibitions in those Districts where there is a reasonable prospect of their being appreciated, and will take care that suitable prizes are offered for cattle and improved agricultural implements.

4. Paragraphs 23 and 24 of His Excellency's Minute will be communicated to the Military Department, with a view to instructions being issued accordingly to the Remount Agent. Funds for the grant of prizes will be provided in the Revenue Department.

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5. The Board of Revenue will report on the general question of agricultural statistics, and suggest the best mode of procuring them after communicating with a few of the Collectors on the subject.

6. The Government of India will be requested to favor this Government with an early reply to their letter of May last on the subject of "Weights and Measures."

(True Extract.)

(Signed) J. D. SIM,
Secretary to Government.

To the Board of Revenue,

- „ Conservator of Forests.
- „ Director of Revenue Settlement,
- „ Military Department.
- „ Financial Department.
- „ Accountant General.

Exd. S. T. Augustin.

Monday

During my absence from Madras, I have travelled, in various directions, through much of Mysore, I have visited the districts of Bellary and Kurnool, and have resided for some time in the higher parts of the latter district. The whole of the country which I have visited is under, what is termed, dry crops - of course advantage is taken of every opportunity of collecting the drainage of the country into tanks, and the water thus stopped in its progress to the sea, is utilized to the utmost extent, still, however, the largest portion of Mysore, and of the other districts named, is dependent upon the rains for the moisture required for the crops - In fact the character of the dry cultivation is analogous to that of England - ^{well} however, this makes difference, that while in England, as a general rule, the farming operations can be carried on throughout the year, with

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Mustard is found
growing irregularly,
then in the drills there
are varieties of Peas
known by the names
of which are prepared for oil.
There are varieties of Choler
or bulbous form, &
when frequently Planted
Castor oil - in some
districts Cotton is Planted
in this way -

different processes do
= each into each other, and
are dependent upon the
power which the Govt can
dispose of, while this power
is in direct relation to the
climate, that no sudden
change can be expected.
It would, however, be very
absurd were the Govt
in a position to
support & carry out some
kind of remedial action
to sit down with such
a set of evils staring
them in the face, and
assume them to be
unremediable. I will
therefore try whether I
cannot suggest a
course of procedure
what may, in this
conjunction, have a
beneficial effect upon
the whole aspect &
= produce of the country.
Before however I allude
to the remedies I will
give a list of some of
the evils requiring
remedy.

- 201 The point is crossed em:
= terminally, and but
lightly manured, much
of the manure being con:
= sumed as fuel, owing,
in great measure to the
abundance of wood -
nothing can be more
barren than the
wholly to tract through
what I have passed -
- 202 The point is badly cul:
= tivated or prepared for
the soil, owing to
the want of weight &
power in the animals
used in draught, &
and to the poor and
unhealthy character
of the soil used -
- 203 The mode of cropping a
field with various
crops & plants is very
unprofitable -
- The first step towards in:
= creasing the quantity
of manure would be to
provide the population
with a better discipline
of fuel - the loss of labour

in bringing in the small
amount of wood and
concerned, and of the
expense in involving in
commerce.

Some arrangements
might be made for plant-
ing a portion of the waste
land of each settlement
Casuarina, or other
trees. I must mention
- vines, but then seem to
grow equally well at
Madagascar in the
country, in a soil with
the sea & on the higher
Platians. I do not know
the sea; & on the hill.
- species of trees, but
higher still - it would
seem to be a tree very
well suited to the climate,
and being indigenous,
or thoroughly acclimated,
they at least could be no
difficulty in propagating
- say it to any extent
from seed - then a
Ficus, which grows rapidly,
does not cast much trash,

and would not therefore
do much injury to crops
grown near it - besides
all this, it furnishes the
very best kind of fuelwood.
In Australia an extra
price was always paid
for the oak, as the Casuarina
was there called -
It might also be as well
to use trees for the house-
- doing much of the diffi-
- cult holding - the
present stone, or ground
of fuel, are often light
characters - the main-
- tained for any time,
which a tree is a lasting
mark. which the owners
of land would be
induced to maintain
by the promise of being
allowed to make use
of it on condition of
planting ^{another} one in its
place -
The effect of planting
upon the climate
cannot but be beneficial,
and it would be well
worth the consideration
of the Gov^t whether

It might not be advi-
sable to provide nur-
series of small plants
as might be best suited
to each district, at only
the stations where there
is an officer who could
be trusted to look after
them - The cost would
be very trifling, and
the young trees might
be given to the natives
upon the sole condition
of planting them -
with a large supply of
firewood the necessity
of employing any kind
of fuel would cease,
and this would be
turned into proper
use as manure.

The labour of manufac-
turing a bumper ^{this} into
the form of small cakes,
would be saved, & the
cost of collecting it
would not be more
than at present -
changes however small
as this require time.

12
but this would seem to
be a good reason for anti-
cipating the results, &
for taking the necessary
steps ^{to prevent} with a little delay
impossible -
The immediate results
will follow from the
improvement of cultiva-
tion -
The first cause had all
attention, namely the
want of weight & power
in the annual employ-
ment of the natives, can only
be remedied any practi-
cally - As manure be-
comes more impor-
tant, more care will
be taken of the stock,
they will be kept nearer
the homestead, fed better
and will gradually in-
crease in size and ca-
pability of working -
A good effect has been
produced in Kollam by
the annual exhibition
of stock, and by giving
prizes for the best cattle.

a similar cause should
be followed in other
birds, as soon as the
Nervous excitations
that that adrenergic
effect is likely to result
from it -

More immediate effects
would be produced by
the introduction of
better instruments. &
The native Sloop is a
light cheap article, but
it can do little but
scratch the ground.
The Kuru Kuru, which I
have attended before, is
but a heavy rake.
I have seen no Harrow,
but a bush is used to
cover the seed when sown
a good light cheap Plough
proportioned to the power
of the Bullocks which
have to draw it, and
which would turn a
furrow deep enough
to expose the roots of
the weed grass, would
be a very valuable
implement -

one good ploughing with harrow
and an after harrowing
with a proper Harrow, &
would save the right
the immense ploughing
with which he prepares
in land. - In a Report
on the cultivation of
different crops in the
Savannah District I found
it stated, that in a sand
soil, the ground is
ploughed in October
in a species of millet twice
in June & and then once
in every fifteen days
till September. That is
the ground is sown six
times - & again for
Cimboa (

) the ground is ploughed
three or four days
in three weeks; and
millet is sown the
the ground is ploughed
twice in June - twice in
July - the process being
repeated in September
and October -
Now all these ploughings
are more for the purpose
of cleaning the ground

might be made in carrying
out the current agric-
-cultural process;
I think too that better
implements, if properly
adapted to the circumstances
of the country, & the means
of power of the people, would
save some their cost by
the saving of labour which
would result from em-
-ploying them -

The new importation
of implements, however,
or their exhibition at an
agricultural show, will
not be sufficient to in-
-duce the natives to pur-
-chase or use them - they
will naturally require to
see the implement, which
it may be, doing a
work, & be able to judge
of its performance, and
to compare these with
the work of their own
The Govt then should be
not only in a position
to exhibit the working
of the different implements,
but it should show
them worked by natives,
so that no doubt should

exist as to the power of the
latter to employ them bene-
-ficially -
doubtless the Government
has an establishment
at Rangoon which offers
all these advantages -
there is already a farm of
about 200 acres attached
to the revenue establish-
-ment, and it has been
proposed to add to this
150 or 200 acres, so as to
serve the Government
as a means of making
a profitable use of the power
he has at his disposal,
by raising produce of
different kinds, either
for the food of his troops
or for sale -
There is a fine establishment
a fair proportion of the
different kinds of soil;
the upland is similar
to the great mass of the
land in Mysore, a red
dandy loam - while in
the bottom there are some
acres of irrigated land -
in this farm, therefore, expe-
-riments might be made
with most great work
all of the new implements

subpoint, with the certainty
that every really good tool
is not only paying its
cost in diminishing the
expensive cultivation &
enhancing the produce
of the Farm, but that
it is making its way
in the estimation of the
people, and will be the
parent of many con-
-sistent benefits to the
Government which in-
-troduces it -

Natives, in certain num-
-bers might be permitted
to attend at the depot
not merely for the purpose
of examining the tool
and witnessing its
action, but to learn
the mode of employing
it - The number of the
pupils must of course
be limited, but the
instruction to the remainder
of the school would be the
effect that the object of
the Gov^t would be best
served by the wide
diffusion among the
natives of the knowledge
of the mode of using the
tool.

It would also be as well
that at the two periods of
seed time & harvest, when
the farm work is in full
operation, a sort of exhi-
-bition should take place.
A ploughing match might
be held about June or July
and some lifting prizes
given to the best natives
ploughmen - while at
about Christmas the
reapers, reaping and
threshing machines
might be exhibited in
action, and eventually
such improved machi-
-nery for oil pressing &
a mill for crushing
the power available
might be exhibited,
and compared with
their results with the
existing native machi-
-nery. Looking upon this
Institution as supplemen-
-tal to my former one
on the introduction of
machinery. I should
wish to add the follow-
-ing list of implements
and machines here
contained -

1. 6 Light Sloughs with wheel.
2. 1 Reel Subsoil Slough.
3. 6 sets Harrows wooden Rhomboidal
4. 1 Horse Hoe
5. 1 No. Expanding.
6. 1 Light improved Drill prepared for sowing seeds of different sizes from Mustard to Wheat.
7. 30 Scythes for short people & light weight
8. 12 Hayrakes wooden American
9. 1 Horse Rake.
10. 1 Good one Horse Cart.
11. 1 Reaping Machine. These would be fair specimens of the class of tools & implements for which we might be found in the same at Bopoor; and more difficult than in material easily procurable in India might be soon manufactured here by native workmen.

what we ought to expect in the native mind is the Principle of the Idea. When once this is fairly engrained it will soon produce the required fruit —

There is one subject in connection with them discussed in this minute which I wish to draw the special attention of the Government to. It forms part of it, but a general question, but may well advantageously be dealt with separately, and form a suitable introduction to the remainder. I mean the collection of Agricultural Statistics. —

From the nature of our connection with the country we have hitherto either found, or found difficulties in the prosecution of statistical inquiries. I cannot however but think that these difficulties are

gradually disappearing,
even as regards those
questions which have a
more close relation to the
domestic arrangements
of the people. I mean
those which require a
record to be kept of births,
deaths & marriages,
would not now be so
distasteful or need to
be anticipated -
The difficulties, however,
which impede the collection
of a variety of useful
agricultural facts,
are not greater here than
elsewhere. The Govt
has here far better means
of arriving at them than
~~anywhere else~~, and
there they are of much
greater importance to
the Govt ^{here} than they can
be elsewhere. In other
parts of the world where
the Revenue documents
bear so direct a relation
to the produce of the soil
as is done in India -
The field is so wide, &
the information in
our possession so scanty,
that the sooner a

methodical system of
collecting, arranging ^{and}
registering ^{can be established} these
facts -
I see no reason why the
Collection in each district
should not be called upon
to forward a Report annually
of all matters connected
directly or indirectly, with
the cultivation of a portion
of the district. A Talook
or village, or a portion
of a village - each district
gives a report upon more
than a small portion,
would but increase the
value of a general sketch
of the district, instead
of a general microscopical
analysis of a
portion - more information
is required, that which
is required, would be
far from an exhaustion
report upon one village
than upon a sketch of
a district -
The information derived
from these reports would
be valuable in two
ways - It would give
the members of Govt
a vast mass of facts of the

thus are at present ignorant
and it would be the means
of inducing the Collector
to look closely into many
matters to which, as
not directly affecting
the execution of their duties,
they now pay but little
attention.

A formal form might be
prepared, noticing the
subjects to which attention
should be paid, more
however as a memo-
randum from the collector
than as a check upon
the introduction of
any extraordinary infor-
mation. They mention
the subjects which are
immediately before them,
because it would be
easy to make additions
from year to year.

1. Description of Talook
or of village in full detail.
physical aspect. means
of population. means
of communication &c.
2. Area of cultivation - of
cultivated waste - Jungs

3. Character of soil. - subsoil
quarries - mines. presence
of minerals metals &c.
 4. Quantities of Irrigation
mode of increasing this.
 5. Quantities of Stock - Cattle
sheep, deer, &c. - prices of
cattle - size & weight of
cattle &c. of sheep - load
for each bullock for
cattle &c. - power of
draft &c.
 6. Cultivation - wet & dry.
crops, mode of cultivation,
tools & ploughing. state of
soil. quantities of seed,
quantities of produce -
from straw - length of time
in ground - how reaped,
how threshed - price -
wages of labour - how
paid.
- There are more general heads
as soon as the Collector
begins to make his enquiry
he will be struck with
the mode in which subjects
advance superior to
isolated themselves. The
more the subject is looked
into the more interesting
will it become, and a
marked difference will
be seen between his reports
described at first, and the

of three or four years experience -
in order to produce as beneficial effects as possible, a summary of the facts placed before the Gov^t should be drawn up with every attention to the details, and not too much condensed, and printed in the different vernacular languages for general circulation. While the report of the Collector should be published in full, in the district gazette. There is one most important preliminary to the collection of statistical information, rather to the comparison of the facts collected, which has already attracted the attention of Gov^t. I mean the improvement of our system of weights

and measures, unless these can be simplified, the bare facts will require so much calculation & reduction to bring them into a form of comparison, as will render them practically useless. - I would suggest then that a reference be again made to the Supreme Gov^t calling its attention to the substance of the recommendation of this Gov^t in its proceedings dated and requesting to know whether there is any institution in the part of the Gov^t of India to adopt the suggestion therein contained, or to make any effort to bring about anything in the shape of an uniform system of weights & measures. Should the reply be in the negative, the Gov^t may then take

the matter is concerned, and do
its best to methodize
and arrange upon
some simple basis the
relation between the
different weights &
measures in use.

N^o. 2399.
Minute by the Hon^{rs}
the President.

Dated
Received at 3 Oct
7 1863.

Rec^d 1 Oct/63.

Rec^d this in type
at once & send
proof to the printer
evening at 4 -
1st Oct/63

Copy in a Letter to Engd.
27/10 Nov 63 no. 117.

Revenue & Dept. of
Pro: of Govt for Govt.

No. 2399

Minute by the Honorable
the President.

Dated 1st October
Received 1863

1974

Bringing under the
notice of Government the necessity
character of cultivation in the
existence of this Commission and
pointing out the steps which it
might be advisable to take
with the view of bringing about
a more wholesome state of
things.

No. 63

Oct 1974

- 1 - This Minute of the President forms a Supplement to his former one on the introduction of Machinery, and the implements of machines detailed in § 25 should be added to the list of those for which application has been made to the Secretary of State.
- 2 - In P, to 10 his Excy comments on the imperfect system of agriculture carried on in those districts which he has lately visited. - The subject is an important one & has engaged the attention of Govt & its officers. - I would refer especially to the elaborate details collected by Dr. Buchanan in the Agricultural Survey which he was directed to undertake for the purpose of obtaining information and the Records of the Revenue Board will be found to contain more valuable reports from many intelligent officers which throw much light on the subject.
- 3 - In my opinion the apparently backward state of agriculture arises less from ignorance or from want of skill than from the want of improved methods than from the discouragement of small farmers in districts where the Government has been so long in existence.

where a handsome profit is obtainable
from the land, as in Cuddapah, Malabar
the agriculture will be found to
be of a ^{superior} ~~improved~~ description, and
I argue from this that the earliest
way of promoting improvement is
to render land valuable & attract
capital to it, by such methods as
fixing a right & permanent appurtenance,
giving security of title, enlarging the
means of irrigation & facilitating the
conveyance of produce to ~~market towns~~
& ports by improving the communi-
cations of the country. - In proportion
as efficient measures are carried out
for ~~the purpose~~ ^{making land valuable}, the mode of farming
will, I am confident, become better, and
I should wish to see the chief energies
of the Govt. directed to measures of
the above description.

4 In support of ~~the above~~ ^{my} remarks I
could point out the readiness with
which the people have improved their
lands & introduced new products
such as indigo, groundnut &c where
the state of the ~~disposition of their produce~~ ^{the power of disposing of their produce}
has permitted them to do so without improvement.

It seems to me also that although poverty
then obliges them to conduct farming
on a humble scale, they exhibit much
aptitude for turning ~~small~~ ^{their} means
to the best account. - Commercially
for example ~~seem to find it their interest~~ ^{generally to improve}
to purchase the produce which they
require for their sugar, indigo & other
factories, although they have made
attempts to grow it for themselves with the
appearance of European skill & ~~industry~~ ^{art}.
5 - But ~~nothing~~ ^{even} should it be
- cited that I have pointed out the
primary method of advancing the
culture of the country, I have no
wish to undervalue the ~~method~~ ^{means}
his Excellency proposes for the same
purposes. Improved implements
placed by Govt, for use as models, in
the hands of some of the more enlightened
native landholders may lead to improve-
- ment ~~in the results~~ ^{results} but they should be
tried in our more advanced districts
- Manuals adapted to the climate &
soils of this Presidency & explaining
the principles of agriculture in simple

language might also produce much benefit
when circulated in the native languages.
Hints for the cultivation of Cotton & indigo
have, ^{of which I am not} ~~however~~, been published in this
manner

6 - On the subject of Statistics I propose
that Mr. Dey's suggestions be referred to
the Rev Board for their consideration &
report. - My impression is that Statis-
tical details already abound in their
records. - Elaborate inquiries have
been made from time to time ^{by various officers} to deter-
mine the yield of the land & the cost
of cultivation. - The Imperialial Returns
show the more important Statistics of each
province. - all the sources of irrigation are
carefully registered in the Public Works Dept
^{under instructions approved by Govt} and the ~~new~~ Survey Land Registers now
being prepared will contain a Statistical
Memorandum for each Village. - The gathering
is attended with some difficulty & requires
careful treatment, as attempts to obtain
agricultural returns have been found to
give the lower native women servants an
opening for interference & extortion. -

15 Oct/83

E. H. M. S. B. G.

of internal commun-
ications, roads, canals,
highways & light rail-
ways, extension of
irrigation, education
of the intelligence of
subordinate officers
officials to a minimum
cheaper & more prompt
administration of
justice, & diffusion of
education - & every
thing in fact which
~~promotes~~ ^{promotes} the per-
sonal cultivation, opens
out to him fresh mar-
kets for his products,
brings him into com-
munication with the
European merchant
and settler, and
by creating a positive
demand for his pro-
ducts gives him the
stimulus which

stimulates economy of
time and labor, &
this has already been
effected to some extent
in respect of exports for
foreign countries, India
of the present world,
and the process is
likely to continue.
3. As to the future
I see no objection to
the immediate opening
of ports and the
desired end in the
way proposed by
H. E. The immediate
which he specifies is
to be applied for in addi-
tion to those in which
already sent home. Agri-
cultural exhibitions
should be encouraged
and the important
machines tools &
implements shown
in practical operation

fastⁱⁿ and results
explained to the assen-
bled eyes. A model
farm in which there
several machines &
tools should be seen in
continued use may
also be established
but I would not place
it at Ossoon which is
on the very frontier of
the Madras Presidency
but under a European
Agent who has
just now been
sent to the
country & who has
that intimate
knowledge of the natives
their ways, prejudices,
and feelings which
is only to be acquired
by long residence in the
Provinces and con-
stant intercourse
with the people. I would
rather have a

12
entirely say at
Coimbatore, where it
would have a better
chance of success
and a present able
and energetic Collector
If a second farm
was required for
the Northern Division
of the Presidency I
would suggest And-
rapur as a better
site.

4. The promotion of
the growth of trees is
on many accounts
an object of great
importance.
The views on this subject
might be communi-
cated to Capt. Bradmore
for his suggestions
as to the best mode
in which they could
be practically carried

5 Pages 27 L35 of
H.E. Lumsden's report
L. Lumsden & Co. House
of Deacons for their
remarks. I must
on for myself about
L. adding L.H. mem-
ber of reports and
returns at present
which began for L.
L. throwing in
labor on the collection
this was over-looked
already - but this must
be may be consider-
ed more fully when
we are in possession of
the Board's decision
6. The paper for me
L. reported L. from
as L.H. at last
and L.H. letter of
13 May sent on L.

I continue of opinion
that the simplified
earliest course would
be a introduction ^{by} expert
standards - which
are now practically
in use on the L.H. way
and at the L.H. Com-
-ton House. The
question however
has not yet been
complicated by
the L.H. - reservation
of the House of Com-
-mons in favor of
the decimal sys-
-tem -

W. G. L.

Oct 24/63

Revenue Report
9th 1894.

Proceedings of the Madras Government
Under date 8th Nov 1893.
Read the following
Minutes.

By the Hon^{ble} The President

Bringing to notice the
clovenly character of cultivation
that exists in this Presd^y, and
pointing out the steps which it
is advisable to take with the view
of bringing about a more whole-
some state of things.

Here enter P. Act 1893

By the Hon^{ble} Mr. Maltby

Expressing his views on the
President's Minute regarding the
introduction of machinery.

do 15th Dec 1893

By the Hon^{ble} Mr. J. J. Perrott

Expressing his views on
his (C. P.) Minute on the present
condition of native agriculture
in this Presd^y, and the defects
incident to it.

do 21st Dec 1893

Resolved, that
the Minutes above re-
corded be forwarded
to the Home Govt. with
a request that the
addition

Copy in a letter to the
Hon^{ble} Mr. J. J. Perrott

11th Nov 1893 (1894)
Proc of Govt of Madras
2537.

Minute by the Hon^{ble}
Mr. J. J. Perrott

Dated 3rd Dec 1893
Revenue 23

1794. 25-
6-1893

Copy of this Minute
and the other Minute of the Board
presented on the present
condition of native agricul-
ture in this Presd^y, and
the defects incident to it.

1765.

1794
11th Dec 1893

additional implements
noted in para 25 of His
Excellency the President's
Minute, may be sent
out with those applied
for on the 13th July 1863

The Bd of Rev.
will be instructed to
communicate with the
Ag. Conservator of Forests
and the Ag. Dir. of Rev.
Hlth. on the subject
of encouraging the
growth of Teakwood,
on the waste lands.

By the existing rules
such land is granted
free of assessment
for 20 years and the
planter is also allowed
to cultivate the land
in the forest in the
spaces between the

the trees, without
any charge - At the
end of that period,
the land assessment
only is chargeable.
There are liberal terms
but assistance might
also be afforded in
the way of supplying
seeds and young plants
and the importance
of not employing un-
suitable manure, as far
should be explained
to the people. —

The Bd will
provide in the Budget
of next year, as also
desired - for Agricul-
tural Exhibitions,
those Districts where
there is a reasonable
prospect of their
being

being appreciated,
and will take care
that suitable prizes
are offered for cattle
and improved Agri-
cultural implements.

Paras 23 & 24 of
H. C. & Minute will
be communicated to
the Military Depart^t
with a view to instruc-
tions being ^{accordingly} issued to
the Resident Agent,
~~to make the District~~
~~Farms useful, as an~~
~~Agricultural school.~~

Funds for the grant
of prizes will be pro-
vided in the Rev. De-
partment. —

The Bd. of
Rev. will report on
the general question

I fear the Govt. of
India will not
grant funds for
model farms. They
have always been
opposed to them.

of Agricultural
Statistics and sug-
gest the best mode
of procuring them
after communicating
with a few of the
collectors on the sub-
ject. —

The Govt. of India
will be requested
to favor the Govt.
with an early reply
to the letter of May
last on the subject
of "Weight & Measure."

Sd. S.

- 14 Copies to the Secy of Rev. Dep^t
- 14 - Conservator of Forests
- 13 - Secy of Rev. Settlements
- 4 - Civil Dep^t
- 5 - Civil Dep^t
- 3 - Secy of India
- 7 - Secy of India

Copy in a letter to England
of 10 Nov. 1863 no. 119.
Repd. 4 of 1864

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For the Cadet Corps
of the University of the South

[illegible]

Second Committee by the
Members of Government
hoping to obtain from England
certain additional implements
with orders thereon.

Pro. 22. 1/2 mi. Depth
5/14th April 1862 Cat. 976

N^o 63 @ 66.