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# MADRAS RECORD OFFICE

## GOVERNMENT OF MADRAS

Revenue DEPARTMENT

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| G.O. No. / B.P. No. | 114 | | Press / Mis. |
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*Not to be folded or roughly handled*

*Proceedings of the Madras Government, Public Works Department, 6th June 1873.*

No. 93. Read the following endorsement of the Chief Engineer for Irrigation, dated Fort St. George, 28th December 1872, No. 69 :—

From the Chief Engineer of the Madras Irrigation and Canal Company, to the Acting Chief Engineer for Irrigation, dated Madras, 4th December 1872.

My accompanying report for October needs a few words of explanation. In the first place it was written by me as Chief Engineer of the Company simply, and does not pledge the Company in any way; and in the second place I have the honour to add a few remarks suggested by a perusal of the records in this office.

2. In my opinion, the attention of the Madras Government can scarcely be too strongly directed to the importance of securing liberty of action and choice to each ryot whose lands are commanded by the canal, so that he may be subjected to no undue pressure to induce him either to use or decline irrigation, and may also have ready means of assuring himself what choice lies before him, *i. e.*, what liability he incurs, under any probable contingencies of weather or of supply, if he use the canal water whether directly, by leakage, or accident, or surreptitiously, wholly or partially.

3. For the higher officers of Government to leave things alone does *not* secure free trade and liberty of action to country ryots. Their condition may be illustrated best by a few examples quite independent of irrigation. Thus, at a country village, a ryot will very rarely, if ever, venture to sell to an Englishman, or his servants, anything—from a cup of milk to a sheep—until he has authority to do so from the highest resident Government Officer, or from one of his official subordinates; and it has occurred to me last month that these officials insist on a charge double the price of similar things (such as a fowl or sheep) in the free markets of Kurnool or Cuddapah, although these last towns, and especially Kurnool, are supplied chiefly by these very villages. Such a circumstance, in my judgment, would justify inquiry; but the Revenue Officers are forbidden to interfere, as it is explained, on the principle of encouraging free trade. Even in Kurnool, carts standing idle in the bandy stands cannot be hired except with the Sub-Magistrate's assent. Ten days ago I hired bearers to take me a stage out of Kurnool for a sum agreed upon, and advanced them a day's pay per man on the contract; but I received a memorandum afterwards from the Sub-Magistrate informing me that their pay was 5½ Annas a man an amada (ten miles), which was more than I had agreed for, and more than used to be the rate (4 Annas an amada) when the canal works were going on, and wages were higher than now. These are mere illustrations, such as are continually occurring, of a fact generally acknowledged even by those who strictly carry out the rules laid down by Government, for what is called non-interference, namely, that pernicious influence is exercised by Government officials over the villagers. I maintain that if Government appoint petty officers in every village and give them authority and dignity, then Government is bound to exercise sufficient "interference" to make sure that they do not abuse their influence for public or private injustice. I need scarcely add that one of the main objects of the Board of Directors, as shown by their prospectuses and publications, is to secure the ryot perfect freedom from pressure and interference

4. The actual area irrigated up to date points to a total area of ordinary irrigation of from 8,000 to 9,000 acres, or, say, Rupees 51,000; as a mere conjecture perhaps 3,000 acres of flooding may be added hereafter. This indicates a total gross revenue not exceeding Rupees 6,000. The apparent deduction is that the revenue for the current season is only half of what it might have been; and this, in my opinion, is borne out by a consideration of the difficulties under which irrigation has been prosecuted. Nothing has occurred, to my knowledge, to indicate that the Natives of these districts are singular in a distaste for irrigation. I accept as true for them the opinion expressed by the Madras Government in 1863 in an Order* drawn up by the Honourable J. D. Sim: "The idea that the ryots of this country need to be taught the benefits of irrigation is contradicted by universal experience, and if they evince any reluctance in making preparations for taking advantage of it in Kurnool, the reason is certainly not ignorance of its value." No longer ago than July 1871, in his Minute, enclosed in a letter No. 14 of 31st idem of the Government of Madras to the Secretary of State, Mr. Sim says, "I see no reason to apprehend that the ryots will decline to take the water at the present rate of 12s. an acre if the supply be really assured, and the Company's Officers treat them with liberal consideration"—conditions which have been fulfilled to an extent to challenge favourable comparison with any similar work.

* No. 2,206 of 15th December 1863.

5. I attribute the failure to two simple primary causes: (1) the want of any means of giving the Resident Engineers speedy authoritative information when a ryot desired to irrigate his land; (2) the want of any authoritative advertisement within easy access of every ryot, stating with sufficient minuteness what he would be liable to pay for irrigation, subject to the ordinary vicissitudes of agriculture. These deficiencies have been extensively disastrous. The ryots have been by prohibiting direct communication between the ryots and such men as Messrs. Wilks, Crawford, Knorpp, and Bradbury, and making each ryot entirely dependent for irrigation on an official—a rival cultivator in his village—under the guidance of such men as A. Ramachendr a Row, T. Krishna Row, and the Tahsildars—men whose relations and office subordinates are speculating largely in land under the canal (and to this I see no objection)—it seems impossible to maintain that the ryot's freedom of action, and freedom from pressure, are promoted by such an arrangement. The facts will be found, I believe, to bear me out in this opinion thoroughly. As to the ryots themselves, if their votes be taken, they will not voluntarily have any communication with the Curnums, but prefer irrigating on such an understanding as they can make with the Engineer or his Overseers if it be only a tacit one.

6. I will go on at once to state the facts, and first it is necessary to describe the existing rules, and then I may give illustrations of their actual working.

(1.) APPLICATIONS.—These are treated in the Draft Rules* under three heads: (1) for irrigation of the first crop; (2) for any subsequent applications, including second crop; (3) for occasional irrigation of dry crop. The first were to be registered by the Collector through the Taluq Officers, and closed on the 1st April yearly, and an abstract in detail forwarded to the Company's Officers by the 1st May. A similar abstract of "subsequent applications" was to be forwarded to the Company's Officers monthly. The last kind of applications were to be forwarded to the Company's Officers as they were recorded.

* G. O. No. 1,830 of 5th October 1864.

7. Before the close of the season 1865 it had become evident t[o] [th]e Government and Company that these rules would not work, and a c[on]- between them, given in the Proceedings of the Board of Revenue, No. [illegible] ber 1866.

13. The Curnum and Reddi of Vellala, Nundiputakoor Taluq, Kurnool, have forbidden and forcibly prevented a ryot of their village from further irrigating his rice field, a well-grown and successful crop, and it has perished. Other ryots of this village have shown their desire to irrigate, and the prohibition which exists in the village by taking up land for rice cultivation in the neighbouring village of Moochmurri where irrigation is freely allowed.

14. I may add that the Irrigation Surveyor reports that, in following up the channels through jungles, he has come (as at Shaitankota) on plots of land being cultivated under canal water of which all knowledge has been kept from the Curnum up to the date of his discovery. What motive induced this concealment, I do not know.

15. I hope these cases may show that it is from their Curnums, accustomed to exercise arbitrary control, that the ignorant country ryots need protection; not from the rapacity and violence of Mr. Wilks or Mr. Knorpp, who love to see liberty and independence. The Company's Overseers are not in a position to oppress; they have to account for any crop under irrigation being starved or lost. They, if they cheated, must make money by giving the canal water surreptitiously for a bribe. But it is different with the Curnums. They may merely passively decline to take an application; for the ryot can only make application if the Curnum will take it; and there are, I suppose, not three villages on the canal in which a ryot could be found who would report his Curnum for refusing his application. He dare not do it.

16. It is manifestly impolitic and unjust to charge a ryot double rate for surreptitious irrigation, simply because no application has been sent to the Collector. The fine for not applying should be small, say 4 Annas an acre, and this would ensure the ryot making a satisfactory arrangement with his Curnum. In any case it is *essential* that the Engineer, or his officers, be informed when water is wanted; for it is he who makes the channels to supply it. The Tahsildar or Collector are not the Executive Officers; and it seems obviously unsuitable to insist that urgent applications for water shall be sent all over the country to the Tahsildar, Deputy Collector, Collector, and Chief Engineer, and shall *not* be in any wise sent to the Engineer or Overseer close by, who alone has the key of the sluice and the management of the channels, and can save the crops.

(2.) Rate.—In G. O. No. 1,272 of 13th July 1863, a water-cess or water-rate of Rupees 4 an acre for the supply of water to one crop only was fixed. I can find no closer definition of this rate by the Government; for instance, I do not find that Government speak of it as "a charge of Rupees 4 per acre in addition to the dry assessment," as if it did not apply to lands paying a consolidated assessment under Government tanks; nor to such enam lands as pay a quit-rent entitling the owners to the use of works of irrigation under Government control. However this might be, Government in their Order No. 1,348 of 1st June 1866, after stating that "the present price charged for water for ordinary irrigation is Rupees 4 per acre for one crop, the supply being sufficient to bring the crop to maturity," afterwards (paragraph 11) "agree to the enhanced rate proposed," namely, Rupees 6, instead of Rupees 4. In the same order sugar-cane is rated at Rupees 12, and Government decline to decide on any special rates for garden crop. Meantime in G. O. No. 1,830 of 5th October 1864, a rule was passed by which claims to remission on the ground of insufficiency of supply, inundation, or defect in the works made by ryots on Government were to be settled; and a charge of "1 Rupee per acre for each effective flooding" was fixed "for occasional irrigation to dry crops" supplied at the discretion of the Company's Officers.

17. I will not stay to point out all the elements of uncertainty in the above orders from a ryot's point of view. In the case of a rice crop reared in the wet season without canal water for half its time, and then matured by canal water, they would seem to me to authorize the charge of Rupees 3 per acre in language; but this is quite opposed to their spirit, and perhaps to the rule on remission. It would be hopeless to collect a rate if deductions were to be made for every portion of the time of growth during which the ryot could dispense with the canal water; yet a recent G. O., namely, No. 2,452 of 18th October 1872, seems based on this view. Again, it seems that the 1 Rupee rate cannot be allowed unless the flooding is taken with the lease of the Company's Officers; yet there is no machinery for giving the ryot proof that he had that leave.

taken ten or twenty floodings, and ought to have paid Rupees 10 or 20. Had that rate been levied the cultivators would have voluntarily taken ordinary irrigation in preference to flooding in future. The above instances prove that the rates have not been understood by the ryots, and confirm the reports of the Company's Engineers to the effect that all kinds of wild rumours tending to check irrigation have been in circulation amongst the villagers throughout the season.

22. Another source of present and future trouble is the custom which has grown up of allowing a ryot to cultivate an irregular portion of his field, and to pay the rate on the net cultivation only. This custom puts the Company at the mercy of their Surveyor, checked by the Engineers. The Government officer appointed to measure the fields as a check on the Company's Surveyor, accompanies the latter and, in fact, learns his work from him. At least in some cases the Government Inspector has great difficulty in measuring any but rectangular fields. This cannot be adopted, and was never intended to be adopted, as a permanent mode, and indeed already it has promoted much attempted evasion. A ryot ought to irrigate his whole field, or to pay for a whole field of which he irrigates part, and the fields should be of a size convenient for him. Now that almost all the village plans are complete, it is time to make this rule. The field area in that case requires no measurement; but is taken from the Government tables, for the completion of which the Company's Officers have been anxiously waiting since G. O. No. 283 of 9th February 1863.

23. It may at first sight have appeared that my remarks disparage the efforts of the Revenue Officers who have had the sole management of the sale of canal water to the ryots for the purposes of irrigation. Certainly the Company's Officers have not interfered to any appreciable extent; and at least every precaution possible and consistent with meeting demands has been taken. The last case of unjustifiable interference of any of the Company's Officers that I know of is that of Mr. Orme who, when Superintendent of Irrigation, was reported to me by the Collector and Magistrate (No. 1,110 of 1st December 1870) of Kurnool, because it had been alleged by some ryots that he (Mr. Orme) told them in reference to some rice crops which had failed to ear, that if they cut the straw and carried it away they would get no remission. [In some districts it is (unless recently altered) the rule that if remission is claimed, the crop must be left on the ground until the claim is settled. This is to prevent deception.] Mr. Chase adds, "I request you to warn Mr. Orme against meddling with Revenue matters with which he has no concern whatever, and regarding which the Government have repeatedly expressed the opinion that the Irrigation Company's Office should abstain from all interference." I instructed Mr. Carruthers to reprimand Mr. Orme, and to remind him that my orders were that he should simply see that water is supplied wherever ryots will take it, and to keep a register of the facts.

24. But I have merely stated existing difficulties, and I see no reason to under-rate existing difficulties, but I have no wish to exaggerate them. They bring to mind strongly the experimental character of the work, and that was known when the guarantee was first given. At the time when experience had thoroughly shown the *engineering* difficulties against which the works must contend, and the insufficiency of the measures adopted by the Company's Officers under the control of the Madras Government, I remember seeing in a newspaper the simple paragraph, "The Madras Irrigation and Canal Company is a gigantic failure." Yet these difficulties had been in a general way foreseen, and it was an important advance to have ascertained them particularly. In the case of *sale of water* also general difficulties have been foreseen; but besides this, the meeting of these difficulties successfully has been confidently foretold. As an instance of this I need only quote the Secretary of State's Despatch to the Madras Government, No. 81 of 24th November 1863, paragraph 2, "I learn with much satisfaction that there will be no difficulty in carrying into effect the views expressed in my Despatch No. 9 of 30th March last, in favour of the plan of a separate water-rate distinct from the land assessment." My impression is that the well-known skill of the Madras Government in settling revenue matters has hitherto been maintained, and is evidenced by the nearly total absence of any need to withdraw, or reverse, any rule hitherto established. A temporary confusion from obscurity is better than the permanent want of confidence which might follow reversals and fundamental changes. With a scheme allowed to be experimental, I see no other alternative than one of these.

IV.—To fix the maximum fine for wilfully damaging any mark sluice, lamp, etc.

(11.) That a mode of application be arranged by which the Company's Engineers shall have the earliest practicable notice that application has been made to the Curnum, and the ryot shall have evidence in his possession that he has applied, and for what.

(12.) That a set of rules be drafted in English and Telugu, stating clearly all the information that a ryot needs to know about water-rate, remission, and penalties, suitable for posting in every village.

NOTE.—I have omitted the governing principle stated in the Company's contract, taking it, as a matter of course, that the *rate* is to be a fair proportion of the value of the water in each case, to the user, as nearly as it can be estimated by those who draw up the scheme of rates.

It is a melancholy thing to see such a splendid and much needed navigation as the canal lying idle; and the valuable gates rotting, as the best timber will deteriorate in this country, with their most important bars, the lowest, between wind and water. The absence of any means of communication during all the sowing and half the growing time cannot but tell against the development of the canal. The "road" between Cuddapah and Kurnool (sanctioned, I believe, about 1856) is still in an incomplete state. Its length is 122½ miles which may be thus classed in November, just as the earth has generally dried after the rains.

Miles 0 to 8.—Good.

8 to 9.—Sandy bed of river Pennair and ford.

Miles 9 to 15½.— Fair and moderately metalled, but trenches are cut 2 to 4 chains apart right across the unmetalled road sides, and either large single stones, as big as a man can lift, or heaps of smaller boulders, are placed in the ruts alternately a chain apart, except between the 10th and 11th mile stones.

15½ to 29.—Except through the villages, is totally impassable to a four wheel; and in many places for half a mile together horses and cattle have to climb at a walk over hardened mud cut into ruts about a foot average depth, across and across in all directions, as carts have struggled along. Where there is a track it is sometimes along the side; sometimes in the jungle off the road altogether. Where the road is fair, stones have been put on the ruts as before. Impassable in rain.

29 to 31 Miles.—Three furlongs good, except in places through Dhoor.

31 Miles 3 feet to 50 Miles.—Bad to tolerable; can trot in parts, and even canter along road-side in places.

50 to 57.—The soil begins to be occasionally red, and there forms a good dry-weather road, impassable in rain. The road here and onwards is more carefully drained.

57 to 74.— A good continuous fair-weather road, impassable in rain; metal is red laterite gravel.

74 to 88½.—An insufficiently metalled road on black cotton soil with many road dams and fords. Fair in fine weather; impassable in wet.

88½ to 122½.—A good fair-weather road; passable barely in rain.

The traffic seemed to be 25 to 30 carts a day going towards Madras with cotton bales, firewood, coir rope, and very few going northwards. It seemed to me that a very moderate expenditure would enable *half* the road to be metalled and drained from the 9th to the 88½ mile, and so ensure a good road except at the numerous road dams and fords. By sparing expenditure money is *lost* in unproductive expense: as where men are engaged putting building stones at intervals in the crooked ruts which have to be removed again and do no good, for a rut is no harm if shallow and on strong metal, and prevention of ruts does not strengthen metal, whereas a little fresh metal (and there is plenty of good hard kunker small enough) could be *nearly* as cheaply strewn along the ruts and would answer the object and improve the road. So where lengths of road of half a furlong or under are metalled in the midst of mud, the carts going on and off carry such heaps of mud on to the metal that the value of it is lost. It is of importance to the Company that more money be spent on this road. During the rainy weather Mr. Knorpp had no resource but employing men to *carry* his camp along it. There is no resource for carts but to go along it,

rates could be allowed for chillies, as in the case of any other dry crop; or the spirit of the instructions contained in the circulars above quoted be maintained. Chillies, I beg to add, are grown in several localities, on dry land, with the little water that the periodical rains supply.

4. Should you find it desirable, on a re-consideration of this subject, to modify the views on which the circulars were based, and approve of the levy of the flooding rates, I request you will be pleased to communicate with the Collector in view to the issue of such further instructions on the subject as he may deem proper.

5. I request to be favoured with your decision in this matter for the prompt acceptance by me of similar applications for the future.

6. I beg to refer you to the marginal correspondence between me and Mr. Browning relative to the special arrangements agreed to for irrigation in the Kotapaud village of the Sirwell Taluq.

To Chief Engineer, No. 95 of 12th August 1872.
From " " 34 of 17th " "
" " " 35 of 20th " "

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From the Chief Engineer of the Madras Irrigation and Canal Company, to the Deputy Collector of Kurnool, dated Ayaloor, 11th November 1872.

*Cottapilly Ryots, Nundial Taluq.*

Your No. 137 of 5th instant. I have the honour to reply to your letter.

2. G. O. No. 1,343 of 1st June 1865, is, so far as I know, the one which fixes the water-rate for all ordinary irrigation of wet or dry, field or garden, crop. I understand it as fixing that rate at Rupees 6 per crop per acre, excepting sugar-cane only. By a previous G. O. No. 1,830 of 5th October 1864, an extraordinary kind of irrigation called flooding had been made permissible to *dry* crops; whether field or garden crops was not stated.

3. I understand that you, as representative of the Government, reduced the fixed water-rates in the case of Kottapaud, Sirwell, with the acquiescence of Mr. Browning as representing the Company under paragraph 2 of G. O. No. 1,348 of 1st June 1866. But I look upon it as a rough mode of settling a rate where the practice had been lax in the previous settlement, and the ryots were in doubt as to what they would have to pay, and as not to be taken as a precedent.

4. My impression is that when Government passed their Order No. 1,830 of 1864, they were under the impression that garden crops would have a special rate fixed for them; hence they may not then have intended flooding to apply to any garden crop. It does not follow that flooding was contemplated for garden crops in G. O. No. 1,348 of 1866; but I am inclined to think that it was intended then that gardens and fields should be treated indiscriminately, because there was not sufficient evidence before Government to show where the line should be drawn. Rupees 8 for half a year for gardens had been approved by Colonel Orr and Rupees 15 for a year (namely, G. O. No. 171 of 20th January 1866).

5. I cannot discuss the question—What are dry crops? It seems to me that the Government officers, who alone have direct dealings with the ryots and can learn the facts, have to settle that, basing their judgment on statistics and facts. If these facts are convincing, the Company's Agent would not be likely to object. But whatever decision is arrived at, I approve decidedly of the utmost possible publicity being given to it. I will suggest that you will know what crops were habitually reckoned dry field crops in 1864; then, when in 1866 flooding was apparently extended to dry garden crops, I presume that it would extend to all garden crop which would mature without irrigation of any kind under the same circumstances under which dry field crop would mature.

6. I will observe that flooding repeatedly, besides being unsatisfactory to the Company as exposing them to fraud, is not always a boon to the ryot. It is quite out of the question that he should not be charged for any floodings beyond six. If he take twenty floodings he takes *each*, because he considers it worth the rupee he must pay for it. The Rupee 1 rate is in its nature partly salvage. If he prefer to take ordinary irrigation at Rupees 6 at any point, he still must pay for previous flooding; hence it is often a kindness to persuade a man to pay for ordinary irrigation from the first.

probably very many reasons of more or less importance there are two which have been highly influential in deterring the ryots from committing themselves to wet cultivation on a large scale. One of these is the fact that, for a series of years, the canal suffered so considerably from accidents, that there was no assurance that a supply of water would be regularly and continuously available throughout the season; and this reason must have been operative throughout the entire length of the canal. Nothing but an unfailing supply, carried for several years in succession, will entirely remove this entirely natural ground of objection to an entire change of the custom of the country in regard to the mode of cultivating the land.

*Vide* G. O., No. 955 dated 22nd March 1869.

I do not wish here to press again for that test of the canal's efficiency which some years ago I recommended should be carried out and of which the Government approved, but it seems to me evident that such a test, successfully gone through, would, independently of its value in leading to the correction of defects, have exercised a very important influence on the minds of those possessing land commanded by the canal, and deeply interested in knowing whether it would be safe to abandon a kind of agriculture on which they had hitherto depended, for one which, though under certain circumstances known to be more remunerative, might, and until quite recently certainly would, have proved more hazardous. There are many of the influences which act upon the ryot of which we know nothing, but it seems to me that it would be attributing a great want of intelligence to these ryots to suppose that the absence of security in the supply of water has not been largely operative.

6. The second reason to which I have referred is not applicable to the whole of the canal, but, in the Koondaur valley, and elsewhere to a more limited extent, it must have had considerable weight. It is the description of soil which is of the kind called *regur* and is, in favourable seasons, capable of producing excellent and remunerative dry crops, of which the principal is jonna (great millet). The people, as already noticed, are accustomed to this cultivation; the cattle that they possess are adapted to it, and are not adapted to wet lands; the general result of this cultivation is well known to the ryots, and has not, I believe, been bad; the advantages of irrigation are comparatively unknown. Here then there has been a deterrent, which would have acted powerfully with any people, and which, with a race so conservative as this people, cannot properly be left out of consideration in appraising the value of the many influences which doubtless have had their effect.

7. It has been laid down as a principle that the Company are to have no direct dealings with the ryots or people needing or using the canal water. The Revenue Officers of the Government are charged with the duty of receiving applications for water from individual ryots, and transmitting them under certain rules to the Company's officers; they also levy the water-rate when it becomes due. This principle may be said to be a necessary sequence to the arrangements which have been entered into between the Government and the Company, much to the advantage of the latter, so far as the collection of their dues is concerned. It may also be admitted that the rules now in force are, if worked as intended, sufficiently adapted to the circumstances in

G. O., Revenue Department, 5th October 1864, No. 1,830.

the case of all applications for water which are made prior to the commencement of the irrigating season. With regard however, to all applications for water which are not included in the list which is closed on the 1st April in each year, the present rule,* under which monthly abstracts from the register are forwarded by the Collector to the Company's "proper officer," is insufficient to ensure the required supply being afforded in proper time. What is, I think, wanted is an arrangement somewhat similar to that provided for in the latter part of Rule IX., providing for the flooding of dry crops, namely, the transmission to the Company's officer, who in this case should be the divisional officer, of all such applications as they are recorded. The way in which this should be done has been the subject of prolonged discussion; the proposals of the Company's officers were somewhat complicated, and other objects, besides the one now under notice of enabling the divisional officer to know at once when water is required and to arrange for its supply, were sought to be realised. What is really required is a more rapid means of communication between the applicant for water and the canal officer who is to supply it.

8. It will perhaps facilitate the solution of this question to point out that while, on the one hand, the Company is not dealing directly with the ryots, on the other hand, there is no reason why the latter should not freely communicate with the local officers of the Company. Under no rules could the canal be efficiently worked if those who are to use the water cannot communicate with those who must regulate the supply except through a channel, which at best must involve great delay, and which generally would be practically absolutely shut. If a ryot gets too little or too much water, he must go to some one close at hand who has the means to meet his wants, if his representations are to be of the slightest benefit to him, and of course he will do so whether his title so to act be admitted or not. It will be much better, I think, to recognize the fact that inter-communication between cultivator and canal officer is essential, and to provide the former with a document which will show at once that to the consideration, which he may at any time have to claim, he is entitled.

9. I would suggest therefore that instead of irrigation permits or water tickets, the ryot making an application for water should be furnished with a copy, or rather a facsimile, of the entry in the register of that application. There would be no difficulty in making any number of facsimiles* up to five or six that might be considered desirable, but one for the applicant, and one for transmission to the local canal officer would perhaps suffice. The book would be furnished by the Company, and probably it would be convenient to have it much in the form of a Post Office Order Book; and, similarly, a stamp might be used if thought desirable. By the use of pillar letter boxes, placed along the canal at suitable intervals, the canal officer's impression of the register could without difficulty

No. IV.

Form given in Rule III.

* By using carbonised paper.



be placed where it could reach him, as would also any representations which the ryots might wish to make on paper.

10. The Chief Engineer lays considerable stress upon the want of "any authoritative advertisement, within easy access of every ryot, stating with sufficient minuteness what he would be liable to pay for irrigation, subject to the ordinary vicissitudes of agriculture." The evil, whatever its extent and effect may be, is one capable of easy remedy, and whatever information it may, from time to time, be desired to convey to the ryots, should be drawn up in due form by the Company's officers in communication with the Collector and, after approval by Government, printed and distributed with the Collector's stamp affixed to it. Every village might have a canal board for all notices connected with irrigation under the canal, and similarly, at every point on the canal where there is any resident establishment, a notice board might be put up.

11. There are several circumstances noticed in Mr. Latham's report on which it is not necessary to comment here, as they sufficiently explain themselves. Some of these are of a kind which it would seem should have been brought to the Collector's notice at the time; they could be dealt with only by inquiry on the spot, and probably there is some ground for reviving a proposition, which was made some years ago and not disapproved by the Board of Revenue, namely, that a Revenue Officer should "be appointed exclusively for the revenue affairs of the Company under the Collector." The Board at that time thought that this arrangement would be a great convenience, but they doubted whether it was *necessary* so far as Government were concerned. Eight years have elapsed, and now after many disappointments there would seem to be a probability of water being available for an area which, if irrigated, would at once relieve the State of a material portion of the large sum now absorbed for guaranteed interest. The Government are very deeply interested in doing all that may be possible to bring the canal into use, and no course would seem to be more advantageous to this end than the employment of a Revenue officer of some experience to ascertain what the ryots' views and feelings in the matter are, and to concert with the Company's officers such measures as may be found to be requisite. It will probably not be necessary to keep this officer on the canal for more than one or two seasons, and such an arrangement would, it may be hoped, result in getting at the truth, and in superseding a correspondence which does not appear likely to have any beneficial effect, while it threatens to be endless.

*Vide* Proceedings, Madras Government, Revenue Department, dated 5th October 1864, No. 1,830, paragraph 10 of Board's Proceedings.

12. The Chief Engineer is anxious that the subject of water rates for crops other than the regular rice crop should be made applicable to the existing circumstances. There is a point too connected with paddy irrigation which it would be well to settle definitively. Mr. Latham says, "in the case of a rice crop reared in the wet season without canal water for half its time, and then matured

this way unless for the purpose intended. floodings even, much less for 20 in order t for as much water as he might require.

14. In the third part of his report the which has grown up of allowing a ryot field and to pay the rate on the nett cu tion only" instead of on the whole of the field. This is quite contrary to the ers on the subject, and the attention of

G. O., Revenue Department, No. 171, 20th January 1866.
No. 662, 15th March 1866.

those concerned should be called to the Proceedings of Government as per margin, which except only the parts of fields too high for irrigation. This exception may, with advantage, be withdrawn, for it must be remembered that all the land or almost all has been recently been or is being, laid out for irrigation, and the ryot can easily avoid leaving any part too high.

15. Mr. Latham proposes that a Committee should be formed to draw up more complete rules than those now in force upon principles to be agreed upon beforehand, and he gives some examples. Referring shortly to these it may be noticed that—

No. 1.—As stated would involve a sliding scale, and this is not likely to be agreed to by either side. A rice crop is not limited to four months.

No. 2.—The deduction from the hypothesis appears to have been inverted; the ordinary irrigation has the first claim, as the Company undertakes to supply it throughout the season. Occasional irrigation is subject to water being available.

No. 3.—I do not understand the practical bearing of these remarks. The canal is a long one, and heavy rains in one section might make more water available in another.

No. 4.—The principle here advocated could not, I think, be carried out in practice, and, besides, it rather ignores the fact that the canal works were undertaken, the State bearing the risk, for the purpose of securing the cultivation from the sad effects of unfavourable seasons.

No. 5.—I have taken a similar view in the case of crops which always require more or less artificial irrigation. No discouragement of the flooding in the case of dry crops, such as jonna, is needed; they will never be flooded except when such a process is necessary to save them.

No. 6.—Not tenable, I think; the Company would and should refuse a supply if all their water were required or engaged elsewhere, otherwise the rate to be paid should be approximate to the rate for ordinary irrigation for the time of the supply.

No. 7.—In the absence of the reasons for this rule, I am not able to give an opinion. Anyhow it could not affect the interests of the Company materially.

No. 8.—Such a classification is not consistent with a water-rate as distinguished from an assessment on irrigated lands, such as still prevails where no separate water-rate has been introduced. The value of the water is not in direct proportion to any classification of land which has hitherto been attempted. The water-rate, if at any time it should need revision, would be settled with reference to the result of its use on a few descriptions of soil, but nothing better than a general approximation can be arrived at. The lands which pay best often take

the least water. Quantity of water used would be only obtained at an accurate calculation, but such accuracy appears to be out of the question.

No. 9.—This ignores individual responsibility.

No. 10.—Bye-laws, on which notes not may be referred. Some points have already been specially provided for, and others may be left for the present, or await some evidence of their necessity or use.

No. 11.—Has already been fully considered in this note, and an arrangement suggested.

No. 12.—The necessity for making such information as is here indicated, known to every one interested, has, I think, been clearly shown.

16. Mr. Latham's comments on the road from Kurnool to Cuddapah via Nandial might perhaps be communicated to the Local Fund Board, though whether they have the means of attending to this order I am not aware. A navigable canal ought to lessen the inconvenience which the bad state of this road has hitherto occasioned; and it may be remarked that the canal is, or with boats will be, available for traffic throughout all the season when, from rain, the roads are of little use.

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
*Chief Engineer for Irrigation.*

No. 91. Ootacamund, 6th June 1873, No. 1,508.

IRRIGATION, No. 11.

These papers will be communicated to the Revenue Department with reference to G. Os. Nos. 2,093 and 60, dated 17th December 1872 and 8th January 1873, respectively.

2. The Government are desirous that all which may be possible should be done to make the Madras Irrigation and Canal Company's Canal in the Kurnool and Cuddapah Districts as useful as possible, and agreeing with the Chief Engineer for Irrigation that the time has come for ascertaining, by careful local investigation, what modifications of the arrangements now in force are necessary in order to popularize the costly works which have been constructed by the Company, the Right Honourable the Governor in Council resolves to request the Chief Engineer for Irrigation and the Chief Engineer of the Company, in communication with the Collectors of the Districts concerned, to submit for consideration such measures as may appear to be conducive to the removal of the difficulties which are supposed to interfere with the free use of the canal water for purposes of irrigation. The subject is one of the greatest importance and demands prompt and careful action.

(True Extract.)

E. C. Shanker, Colonel, R.E.,
*Secretary to Government.*

To the Chief Engineer for Irrigation.
,, Agent and Manager of the Madras Irrigation and Canal Company.
,, Revenue Department.
Exd. E. C. Shanker.

20 Sheets Copies

Govt. of Madras.

PUBLIC WORKS.

No.

THE CHIEF ENGINEER for IRRIGATION.

&c. &c. &c.

Read June 6th.

Read June 16th 1873

Read

G. O., 6th June 1873, No. 1,305.

JUNE.

Nos. 93 94

*Madras Irrigation and Canal Company.*—Passing orders on the report, submitted by the Chief Engineer for Irrigation, on the Madras Irrigation and Canal Company's Canal for October 1872.

No 114 - 19 June 1873

Well & order