

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	2416	Press
		~~Mic~~
376-377		
Dated 25 th Aug 1869		

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department,
25th August 1869.

No. 376. Read the following Proceedings of the Board of Revenue, dated 14th August 1869 :—

Read again Proceedings of the Board, dated 13th July 1869, No. 5,007.

Read also the following letter from the Acting Honorary Secretary, Government Farm, to the Acting Secretary to the Board of Revenue, dated Sydapet, 29th July 1869, No. 32.

I HAVE the honour herewith to forward the remarks of Mr. Robertson, the Superintendent of the Government Farm, upon Mr. Crole's experiments in the cultivation of Carolina paddy at Chingleput, as called for in the Board's Proceedings, No. 5,007, dated 13th instant.

From Mr. W. R. ROBERTSON, Superintendent Government Farm, to the Acting Honorary Secretary Government Farm, dated Sydapet, 26th July 1869.

In compliance with paragraph 4 of the order of Government, dated 17th June 1869, No. 1,728, I have the honour to offer some remarks on the Carolina paddy experiments, detailed in the Proceedings of the Board of Revenue, No. 5,007, dated July 13, 1869.

2. In paragraph 2, enclosure No. 1, it is stated that "the seed was inf..." however, the results detailed appear rather at variance with this statement. Judged by these results the seed must have been of a very superior kind. The poor return obtained in one or two of the experiments must have been due to causes altogether unconnected with the *quality* of the seed.

3. It is to be regretted that experiments Nos. 2 and 3 have been classed with the other experiments: they are altogether of a different nature and possess nothing in common with the others. In no sense are they agricultural experiments. They possess a good deal of interest in showing what can be done under "Extraordinary" management, and how the cost of paddy cultivation may be considerably reduced by a much smaller quantity of seed being sown; but these facts apply to the cultivation of all kinds of paddy, and have no special bearing on Carolina paddy culture.

4. It is scarcely necessary for me to observe that the extraordinary outturn said to have been obtained in the experiments marked Nos. 2 and 3, is altogether a misconception. It was assumed by the reporter that the 1,942 plants said to have been planted in the former experiment, were the produce of as many seeds. It is perfectly true that each plant would be the produce of a single grain, but all conversant with actual field-practice are fully aware that the number of plants reared to a size fit for being transplanted bear a very small proportion to the number of seeds sown: some seeds are put in too deep, some too shallow, insects, birds, rats, squirrels prey on the young plants. If every seed produced a perfect plant show, one measure per acre would be an ample seeding. The reporter appears to have under-stated the number of plants he planted out on the ground, upon which experiment No. 2 was conducted. According to the area of ground given under column 8, nearer four thousand than two thousand plants must have been put down; that is, provided all the plants were put in at equal distances of one foot apart.

5. Two very interesting facts have been brought to light by these experiments: first, that by transplanting a large quantity of seed can be saved; and that early sowing produces the best results.

THE Board resolve to submit these papers to Government.

2. They understand that it was because only a small proportion of the seed originally sown germinated, that experiments Nos. 2 and 3 were undertaken, in order to prove what Carolina paddy is really capable of in this country, as well as to ensure by careful culture a supply of seed at all events undeteriorated and

*Proceedings of the Madras Government, Revenue Department,
25th August 1869.*

possibly improved. This object was successfully attained, and the Board are of opinion that the result is both interesting and valuable.

3. The apparent discrepancy alluded to in the latter part of paragraph 4 of the Farm Superintendent's letter is explained by a reference to the column of remarks

No. 377.

ORDER THEREON, 25th August 1869, No. 2,416.

Miscellaneous.

ORDERED to be recorded.

(True Extract.)

(Signed) H. WELLESLEY,
Acting Under-Secretary to Government.

To the Board of Revenue.

Copy of the Report of the Commission
on the Cultivation of the Carolina Paddy
in the Madras District, 1869.

AUGUST.
Nos. 376-377.

June 1, 1869.
1869.
G. O. 254, 1869, No. 210.

THE BOARD OF REVENUE.

REVENUE.

Oct. 31 1869

No. 5,007.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 13th July 1869.

Read the following letter from E. G. R. FANE, Esq., Collector of Madras, to the Acting Secretary to the Board of Revenue, dated Sydapet, 14th June 1869, No. 185:—

I HAVE much pleasure in forwarding, herewith, a most interesting and valuable report* on the experimental growth of Carolina Paddy in the Sub-Division of this district, and am of opinion that very great credit is due to Mr. Crole and Dr. Thompson, and the native proprietors who respectively made the experiments for having succeeded so well in the face of the notoriously adverse character of the late season.

2. As the cultivation of this description of rice is about to be attempted on a large scale at the Government Farm, Sydapet, I beg to suggest that a copy of Mr. Crole's letter and of its accompanying Statement may be sent, when printed, to the Honorary Secretary of the Farm.

3. I beg also to recommend that Rupees 100 be placed at Mr. Crole's disposal to enable him to proceed with the further experiments he proposes, in paragraph 10 of his letter, to make.

4. I take this opportunity to report, that since the date of my letter to the Board, printed with their Proceedings of the 13th May, No. 3,251, I have received reports on the results of two other experiments that have been made in this district. One from Pichivakam Sivarama Moodelly, and the other from Kattavur Sundra Moodelly; great credit is due to these proprietors for having also succeeded so well in spite of the season. I have written to both of them, asking them whether they could spare any of their produce for distribution to other ryots in the district, or whether they mean to plant it all out themselves this next season.

ENCLOSURE No. 1.

From C. S. CROLE, Esq., Acting Sub-Collector, to the Collector of the Madras District, dated Chingleput, 4th June 1869, No. 121.

I HAVE the honor to report on the experimental cultivation of Carolina Paddy in the Sub-Division during the past year, and to submit the results in the enclosed form.

2. The seed was inferior. This was the opinion of all to whom it was distributed.

3. The season was eminently unfavorable.

4. You will observe, however, that the experiments were generally successful enough, and that in some cases the results were very satisfactory. The outturns ran from 7 1/2 fold in No. 2 to 3 fold in No. 17. The average outturn on good rice land this year, I believe to have been something like 30 fold, or about 50 per cent. of that in a good year. Due allowance must therefore be made for the results of the experiments. That the Carolina grain is superior to the best of the rice staples of the country is not now denied, and this conclusion is supported by the result of experiment No. 9 A., in which the Carolina grew alongside a crop of Manavar Sumba under precisely similar circumstances, and yielded 1 1/2 fold more than this, the best paddy raised in the district.

5. The advantages of the cultivation of the former are:—

1. It is a four months' crop.
2. It requires certainly not more than $\frac{1}{4}$ of the water necessary for the country sorts during a like period.
3. Twenty-four measures of seed is ample for a $\frac{1}{4}$ of land, whereas at present the ryot uses 32 measures.
4. Each seed which germinates is capable of producing from 10 to 17 plants without any particular care. The Country paddy does not possess this tillering power to any appreciable extent.
5. The ears are out of all comparison, larger than those of Country paddy grown under the most favorable circumstances.
6. The largeness of its yield.
7. Its superiority as a food grain. Vide Dr. Thompson's report, already submitted.
8. It yields a greater amount of straw; of a sort also more succulent and palatable than that of ordinary paddy.

6. These things are now generally recognised by the ryots of this division, and although the late adverse seasons have doubtless been detrimental to the country in other respects, yet they will have borne good fruit if they have compelled the attention of the people to subjects like these.

7. Much of the standing crop growing near Chingleput was stolen by persons evidently desirous of trying the grain. I had also many applications for the seed after the general success of the experiments became notorious. In order to make sure that the seed should find its way into the hands of persons really desirous of trying it, and also to secure care in its cultivation by causing the investment of capital in it, I determined to put a price on seed taken by the ryots this year. A further proof of the estimation in which it is held is afforded by the fact, that, whereas some months ago, it commanded only one Anna a measure (the same as good country seed,) what remained of the stock in hand was taken in May at two Annas a measure by certain ryots of the Chingleput Talook.

8. The special results of last season's experiments seem to be:—(1) that Carolina paddy thrives well without the elaborate preparation of the soil and expense of water, which is required to reduce the fields into a state fit for the cultivation of ordinary paddy; (2) that the plant does better after transplantation; (3) that it will stand almost any amount of ill-usage to its roots in transplantation; (4) that much water is injurious rather than beneficial; (5) that the ryots recognise the superiority of the staple, and the advantages to be derived from its cultivation.

9. I think also that the young plants required to be transplanted *singly* six inches apart. The natives do this at present, but they dibble in a bunch of plants together. The seedlings require room, for if huddled together, one weakens the other, whereas if sufficient space and light be allowed, a single plant is by harvest time transformed into a bush with ten and often seventeen or eighteen ears. Broadcast sowing in this country always fails in securing this *sine qua non*, and for this reason alone I think the ordinary system of seed-beds and transplantation preferable.

10. There is a very eligible piece of land near the gate of the Sub-Collector's Cutcherry at Chingleput and adjoining the Government garden. This was levelled by the prisoners last year, and some of my experiments were made upon it. Owing to its situation and its low level, it more resembles a paddy field than the porous Punjei soil, on which the rest of my experiments were made. I have the honor, therefore, to request that I may be put in funds, say to the extent of Rupees 100, to meet the expense of properly manuring and ploughing the land, and irrigating, weeding, and guarding the crop which I intend to raise there during the approaching season. Owing to want of funds last year, I was obliged, as you will see from the Tabular Statement, to abandon one half of the crops. The remainder also suffered.

11. In connection with this subject, I may observe that much interest in the success of these experiments was evinced by ryots attending the Cutcherry, and that the subject was more than once alluded to by them at the Jummahbundy.

12. I have explained to many persons during the past year that no enhancement of the assessment is contemplated on the introduction of Carolina paddy; an announcement which was received with evident relief. The people of the Sub-Division are still quite ignorant enough to oppose success from apprehensions of changes of this sort; but these being removed, their natural conservatism is sure to give way to considerations of personal advantage, and there can be little doubt that the cultivation of this grain will revolutionise Indian agriculture, and affect the Revenue and prosperity of the country to an extent which it would be hard to calculate.

ENCLOSURE

Sheet showing the particulars of culti

Name of villages.	Names of Cultivators.	Quantity of the seed sown.	Whether transplanted, sown, or broad cast.	Date of sowing.	Date of transplantation.	Space left apart between each plant.	Extent of land in which cultivation was made.	Quantity of Paddy sown broad cast or of which the seed Paddy transplanted.	
								By measurement.	By weight.
1	2	3	4	5	6	7	8	9	10
1. Mulmayar in the Chinglepat Talook.	C. S. Crole, Esq., Acting Sub-Collector.	Measures. 4	Broad cast in dry soil.	21st Sept. 1869.	...	ft. 1	aca. o. c. 0 3 11	Measures. 4	lbs. o. s. 10 1 0
2. Do.	Do.	...	Transplanted in dry soil.	...	29th Oct. 1869.	1	0 1 10	1	0 2
3. Do.	Do.	...	Do.	...	Do.	1	0 2 3	1	0 3
4. Do.	Do.	8 1/2	Sown in mud.	13th Nov. 1868.	...	1	0 7 7	3 1/2	9 3
5. Do.	Do.	...	Do.	...	...	...	0 4 15	2	5 4
6. Do.	Do.	...	Transplanted in mud.	11th do.	10th Jan. 1869.	...	0 2 14	2	5 4
7. Do.	Doctor Thompson	1	Broad cast in mud (Sair).	10th Augt.	...	...	Sq. feet. 1,539	1	...
		...	...	...	10th Sept.	...	1,539	1	...
		...	...	...	20th do.	...	1,539	1	...
		...	...	...	31st Augt.	...	1,539	1	...
8. Penayar in the Maturakam Talook.	Ramachendrier.	4	Sown in mud Broad cast.	31st Dec. 1868.	...	1	aca. o. c. 0 9 14	4	...
9. Nattam in the Chinglepat Talook.	Balraubraya Mudaliar.	A. 5 1/2 B. 2 1/2	Do. Do.	3rd Sept. 1869. Do.	...	1/2 1/2	0 7 0 0 3 5	5 1/2 2 1/2	...
10. Do.	Do.	6	Broad cast in dry soil.	11th do.	...	1/2	0 6 10	6	...
11. Utramalore.	Ramarayer.	2	Sown in mud.	4th Dec. 1869.	...	1/2	0 6 10	2	...
12. Madrantakam.	A. Narasimam Chari.	5	Do.	10th Nov. 1869.	...	1/2	0 10 5	5	...
13. Stripermattur.	Tirumala Naidu.	6	Broad cast in dry soil.	20th Dec.	...	1/2	0 7 7	6	...
14. Salabegam in the Conjevaram Talook.	Periapian and Krishnasen.	8 lbs.	Sown in mud.	2nd Nov. 1868.	...	7 inches	0 21 14	3	8 0
15. Perambakam in do.	Nilakanta Mudali and Sirungummal.	1 Mea.	Do.	28th Dec.	...	4 do.	0 9 0	1	...
16. Apasahayem puttabdar in do.	Parada Chetti, Ravavalinappa Chettiar.	2 do.	Do.	14th do.	...	13 do.	0 01 0	2	...
17. Odapattabdar in do.	Subbaraya Mudali.	4	Do.	11th do.	...	13 do.	9 16 2	4	...

5th June 1869.

No. 1.

vation and outturn of Carolina Paddy.

Date of reaping.	Average height of plants at the time of reaping.	Quantity of grain produced.		Description and class of the soil in which the crop is grown.	Quantity of country paddy of similar cultivation usually produced in an Acre.	The weight of straw	Remarks.
		By measurement.	By weight.				
11	12	13	14	15	16	17	18
6th Feby. 1869.	ft. 4	Measures. 60	lbs. 157 1/2	3rd Class Panjah land.	400 measures per Acre.	Gross weight of straw is 450 lbs.	The crops of Nos. 2 and 3 were raised from the thinnings of No. 1. This was sown as a dry crop. For the first month, Nos. 1, 2 and 3—was watered only once a week, and afterwards like a common garden crop. Outturn 7 1/2 fold, irrigated with liquid animal, and vegetable manure. Gained extra prize at Agri-Horticultural Show. This crop was raised from 1,913 plants grown in No. 1—each being the produce of 1 grain—equal to 1 1/2 of a measure of paddy.
Do.	5 1/2	84	89 1/2	Do.	Do.	...	Outturn 5 1/2 fold. Some of this was transplanted 1 1/2 feet apart for the sake of experiment. No particular care was taken of it.
Do.	5	86	99 1/2	Do.	Do.	...	Nos. 2 and 3 were, owing to the porous nature of the soil, watered first once, and latterly twice a day. Partially failed. First from excess of damp, and afterwards from want of water. Abandoned, owing to want of water. Ditto.
* This is the full outturn of the 4 measures sown in No. 1, as only thinnings from that were transplanted into Nos. 2 and 3.							
11th April 1869.	3 1/2	48	126 0	Paramboke bed of an old pond.	700 Measures per Acre.	170 lbs.	Outturn 123 fold.
...	...	...	...	...	Do.	...	...
...	...	...	...	...	Do.	...	...
30th Nov.	6	61 1/2	167 3/4	Rich alluvial soil not assessed.	...	...	124 fold.
24th Dec.	5 1/2	62	155 9	Do.	...	...	...
Dec.	...	...	...	...	...	...	These were, I believe, still more successful. Result not reported by Dr Thompson who has left the station.
3rd May 1869.	3	120	...	2nd Class Nanjah land.	729 measures	...	A crop of Raggy was first raised on this land. It was reaped in September and the Paddy was sown as second crop—30 fold.
7th Jan. 1869.	4	200	...	Do.	864 meas.*	...	* A piece of ground under a good crop of Manavar Samba next to this and of the same extent was reaped under the supervision of the Tahsildar and was found to yield 1 1/2 fold less than the land under Carolina paddy. Much of the latter was stolen by passers by, when in ear. It will be observed also that far too much seed was used, owing to a misapprehension.
Do.	3	16	...	Do.	Do.	...	...
20th do.	3	96	...	1st Class Nanjah.	960 measures	...	Out turn 36 1/2 fold.
8rd April 1869.	3 1/2	87 1/2	...	Do.	900 do.	...	43 1/2 fold.
29th March 1869.	3	196 1/2	...	4th Class Nanjah.	744 do.	...	87 fold.
3rd May 1869.	3	37	...	4th do.	576 do.	...	...
12th April	3	56	140 1/2	3rd do.	768 do.	...	...
...	...	...	...	3rd do.	...	...	Perished apparently from neglect and carelessness.
15th April	3	27	...	1st do.	192 measures	...	...
20th do.	3	18	...	2nd do.	384 do.	...	...

(Signed) C. S. CROLE,
Acting Sub-Collector.

These reports will be forwarded to the Superintendent Government Farm, for his observations through Honorary Secretary. In their Proceedings of July 10th, No. 4,177, the Board called on Collectors to report on the question of experimental farms for Carolina Paddy, and the Collector will doubtless recommend one at Chingleput, giving particulars as to the proposed expenditure.

2. Meanwhile, the Board sanction the sum of 100 Rupees to be expended by Mr. Crole in continuing the experiment.

3. The interest taken by Mr. Crole in arriving at satisfactory conclusions in respect to the cultivation and yield of this grain, and in placing the results before the people with assurance in respect to the object of its introduction, must have very encouraging results.

(True Copies and Extract.)

(Signed) J. G. ROSE,
Acting Secretary.

To the Collector of Madras, with two enclosures returned.

.. the Superintendent of the Government Farm, through Honorary Secretary.

Copy to the Accountant General.

Ed. G. A. Turton,

Carolina Paddy—Report from Mr. Crole, Acting Sub-Collector of Madras District, on result of experimental cultivation of, in Sub-division, forwarded to Superintendent Government Farm for his observations.—Rupees 100 sanctioned for expenditure by former in continuing experiment.

JULY.
No. 5,007.

Received

Encl

PROCEEDINGS, 15TH JULY 1869, No. 5,007.

Board of Revenue,
MADRAS.

Entered in the Proc. of the
Board of Revenue to the Honorary
Secretary dated 27th July
1869. No. 2733.

No. 17. June '69 No. 398-399

Revenue 1869 Q/10/11

No. 2733

Proceedings of the
Board of Revenue

Dated 14th August 1869
Capt. H. J. ...
Encl. 1

No. 2733
No. 2616
STOCKY. E.P.

Carolina Paddy,
Report of Mr. Crole, Sub-Collector
of Madras, on experimental
cultivation of, in Sub-division,
together with observations of
Superintendent of Lydiapet Farmington
submitted to Government,
with remarks.

To the Board of Revenue

27th July 1869

376-377