

(1) Number of Pages 22.
(2) Date of repair 25. 10 1867
(3) Initials of the Referencer 17.2.68

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue. DEPARTMENT

G.O. No.	845	Press
B.P. No.		Mis.
Dated 29. 5. 1875		196

Not to be folded or roughly handled

845

*Proceedings of the Madras Government, Revenue Department,
29th May 1875.*

No. 350 Read the following letter from C. J. LYALL, Esq, Under-Secretary to the Government of India, Department of Revenue, Agriculture, and Commerce, (Agriculture and Horticulture.) to the Secretary to the Government of Madras, dated Simla, 14th May 1875, No. 2/174:—

I AM directed to forward herewith, for the information of His Excellency the Acting Governor in Council, copy of a letter from the Government of Bengal, No. 1,416, dated the 26th ultimo, together with copy of a report furnished by Mr W. C Taylor, Deputy Collector of Pooree, on some experiments made with Carolina paddy-seed in Khurda.

2 It will be observed that some of the varieties found by Mr. Taylor to exist in the seed furnished to him as Carolina paddy have proved strikingly successful in Orissa; and I am to inquire whether the paddy-seed has elsewhere been found to contain more than one sort of seed-rice.

ENCLOSURE No 1.

From R. KNIGHT, Esq, Assistant Secretary to the Government of Bengal, Financial Department, to the Secretary to the Government of India, Department of Revenue, Agriculture, and Commerce, dated 26th April 1875, No. 1,416-A.

In continuation of this office letter, No 3,541, of 19th December last, and Resolution

No 161-A, dated 22nd March 1875, with annexure from the Board of Revenue
No 350, dated 23rd March 1875, from the Commissioner of Orissa.
No 191-A, dated 2nd April 1875, with enclosure, from the Board of Revenue

No 104 of the Government of India, dated 9th ultimo, on the subject of the cultivation of Carolina rice, I am directed to submit copy of the correspondence noted on the margin, with reference to paragraphs 3 and 5 of the letter

and paragraphs 2 and 4 of the Resolution above quoted

2. The points noticed in these paragraphs are (1) the results of the sowings of 1874-75 from the produce of 1873-74; (2), the statement by the Superintendent of the Ranchoe Jail that the husk of this paddy is found to separate so readily from the grain that it takes but half the usual labor to clean it; and, (3), Mr Taylor's experiments in Pooree, with what he described as "acclimated Carolina seeds of sorts, picked out from the crops obtained from mixed seed received by him from the Superintendent of Canal Revenue three years ago"

3. With regard to the first of these points, His Excellency the Governor-General in Council will observe that the experimental sowings of 1874-75 were a complete failure in the Presidency, Chittagong, and Chota Nagpore Divisions; and these are the only reports that have as yet reached this Government

4 As to the husking of the seed, Mr Hoskins seems to have relied entirely on the testimony of the native gentleman who conducted the experiment, and he has no independent means of verifying his statement that this paddy is more easily husked than the indigenous grain. The Lieutenant-Governor thinks there can be no doubt that the statement is an error

5. As to the third point, I am to solicit the attention of His Excellency the Governor-General in Council to the history which Mr. Taylor gives in the accompanying correspondence of the experiments, concerning which further inquiry was made of him in accordance with the Government of India's desire. Mr. Taylor's experiments began in 1871 with a barrel of seed received by him from the Superintendent of Revenue Canals. He states that he distributed the whole of the seed to ryots with the exception of half a seer only, which he sowed in his own garden. The ryots sowed on low paddy lands and failed completely, the plants rotting from excess of water. The history of the remaining half seer is of some importance. The seed germinated and grew well, but Mr Taylor succeeded in getting only 2½ seers of produce. He

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found, however, that there was more than one sort of paddy in the crop, and again sowed two seers of the yield at the beginning of the rains of 1872 in a seed-bed in his own garden. The seed again germinated well, and the growth was planted out on rather highland, not very rich, but commanded by water. Although damaged by blight, the yield was ninetyfold the seed. Mr Taylor found no fewer than sixteen varieties of paddy in the produce of these two seers.

6 In the same year he seems to have sown five seers of seed received by him from the Pooree Jail, described as "acclimatised South Carolina paddy" on land similar to that in which he transplanted the two seers of "seedlings" from his own garden. Of this seed only 50 per cent germinated, but, although half the seed was thus lost and the crop injured by blight, the yield was about sixteenfold the seed sown. In this produce again Mr. Taylor found ten or twelve different kinds of paddy, similar to some of the varieties produced from the two seers sown in his garden; and he not unreasonably concludes that the seed received by him from Mr. Kirkwood in 1871, and in 1872 from the Pooree Jail, were originally from the same source.

7. From these two crops of 1872 he carefully sorted sixteen varieties of paddy in all, and two of these varieties proved strikingly successful in 1873. One of them,—a small yellow rice of good color and flavor, of which one seer was sown as before in a seed-bed in June 1873 and planted out in July,—yielded 161 seers produce.

The land was of medium quality only, enriched with a few baskets of cow-house manure. The ploughing was of the ordinary kind, and the crop depended mainly on the rain-fall, being irrigated two or three times only. The plant grows about three feet high, gives an ordinary outturn of straw, wants no deep cultivation, can be grown on highland, is an early crop, and requires neither much water nor much care. The variety is likely, says Mr. Taylor, to become popular, and it has obtained from the people at Khurda the name of *tiki-dhan* or small paddy. A sample of this variety (marked No 3) has been received by this office from Mr. Taylor, and will be deposited in the Economic Museum.

8. Of the other variety sown in 1873, and which proved successful, 44 seers were partly sown broadcast, it is presumed, and partly planted out. The general result was a yield of fifty-fold the seed. In this case again the paddy does not seem to require deep cultivation, the plants growing equally well in six inches of soil and in deep mould. Mr Taylor measured plants seven feet high on the six-inch soil. Planting out or sowing broadcast seemed to make very little difference in the yield, which was very good, both of grain and straw. The rice is white and of good quality, though rather coarse and large. In this instance no irrigation was possible owing to the deficient rain-fall, and the experiment is very encouraging.

Two samples of this variety (Nos. 1 and 2) have been received from Mr. Taylor, and will be deposited with the other in the Museum.

9. Mr Taylor notices the fact that it was from the produce of these two successful experiments of 1873 that the Burmah Administration was supplied with acclimatised Carolina seed last year, concerning which doubts were expressed by the Chief Commissioner as to whether it really was Carolina paddy at all.

10. The South Carolina paddy usually distributed for experiment, and of which Mr Taylor submits a sample (No 4), requires, he says, very deep cultivation, and is not suited for Orissa. The grain is most troublesome, moreover, to thresh, while the yield is no larger than that of many indigenous varieties much easier to cultivate.

11. Mr. Taylor's experiments in the last year (1874) were not so successful as those of 1873, but the plants were very fine, and sample No 2, sown broadcast, yielded a thirty-sixfold return, and the No 3 variety, or *tiki-dhan*, transplanted eighty-sixfold, while No 4, the pure Carolina variety, failed altogether.

12. Upon the whole, the Lieutenant-Governor is disposed to think that these experiments of Mr Taylor's are perhaps the most encouraging, and the most important that have yet been recorded in this matter in Bengal. They seem to point to the conclusion that, amongst the numerous varieties of seed which have been imported by Government as South Carolina, there are at least two descriptions of grains to which the soil and climate of Orissa are peculiarly

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adapted. The seed seems to succeed almost equally well, whether transplanted or sown broadcast; to want no peculiar cultivation, to be nearly independent of irrigation; to ripen early; to require moderately highland only, commanded, if possible, by water; and to yield a heavy return of fine grain and good straw.

13 Mr. Taylor, I am directed to say, will be requested to follow up these experiments carefully. It is deemed better for the present to confine them to Orissa, the soil and climate of which appear to be so favorable to their success. Should the present year's sowings again prove successful, an effort should, the Lieutenant-Governor thinks, be made to diffuse the cultivation further.

Endorsed by the Officiating Secretary to the Board of Revenue, Lower Provinces, dated 22nd March 1875, No 161-A.

COPY of the following submitted to the Government of Bengal, Financial Department, with reference to G O, No 3,537, dated 9th December last.

From E E LOWIS, Esq., Commissioner of the Chittagong Division, to the Secretary to the Board of Revenue, Lower Provinces, dated 13th March 1875, No. 619, G C.

WITH reference to the orders of Government, No 3,537, dated the 9th December last, forwarded under cover of your office memorandum, No. 816-A, dated the 22nd idem, I have the honor to submit the following report.

2. The Collector of Chittagong states that "of the two gentlemen who cultivated the Carolina paddy in 1873-74 with any success, the Court of Wards' Manager made the experiment during the last season with his produce, but the seed did not germinate at all. No information has been received from Mr Macalpine (the other successful cultivator), who is now away from the district."

3. The Collector of Tipperah reports that in two cases only experiments were made last season with the produce of 1873-74. In one case an outturn of 5 seers 15 chittacks was obtained from 2 seers of seed sown; and in the other the experiment proved an entire failure, owing, it is said, to the heavy rains which fell in May last.

4. It appears from the report received from the Collector of Noakhally that only 13 seers of paddy of the previous year's produce were available for experiment in the year 1874-75. Of this quantity, 10 seers were given to the Superintendent of the Jail for experiment in the jail garden, but most of the seed was without vitality, and only two and a-half seers, though not of any good quality, were fit for sowing. This quantity was, it is reported, sown with all necessary care and transplanted, and the crop was reaped in November, the outturn being 1 maund 2 seers of paddy.

5. The remaining 3 seers of the seed were delivered to the Superintendent of the Bhulloah Estate for experiment, of which 1 seer was found to be mere husk and 2 seers only were fit for sowing. He appears to have made his experiment in two kinds of land (high and low), sowing one seer on each description of land. It is reported, however, that only 10 per cent. of the seed germinated, the yield on the highland being four seers and on the lowland being 1½ seers only.

6. The Collector of Noakhally further reports that, adjoining the two plots mentioned in the foregoing paragraph on which Carolina paddy was sown, two other pieces of land were sown with an equal quantity of country paddy. After taking the same care and going through the same process, it is stated that the country paddy grew much thicker and stronger, and that the seedlings of the two kinds of paddy were then transplanted.

7. "The Carolina occupied," to quote from the Collector's report, "an area of 10×7 feet out of its two plots, the rest remaining fallow owing to insufficiency of seedlings; and the country paddy was planted out to the full on the two areas of 31×21 feet respectively. The outturn of the former was 4 seers in the high and 1½ seers on the lowland, while the latter yielded 21

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seers in each of the two plots where it was transplanted. From this it appears that the cultivation of the Carolina paddy almost entirely failed on the lowland, while on the highland the result is not satisfactory, as in proportion to the respective areas under cultivation. The yield on the highland was 12 seers of Carolina paddy against 21 seers of country paddy, the Carolina paddy-land being about one-third of the country paddy land."

8. None of the district officers have made any remarks as to the identification of the seed.

Endorsed by the Personal Assistant to Commissioner, Orissa Division, dated 23rd March 1875, No. 350.

COPIES of Collector of Pooree's letter, No. 1,051, dated 16th March 1875, and its enclosure, No. 337, dated 13th March 1875, from Mr. W. C. Taylor, Deputy Collector, Khurda, giving a circumstantial account of the history of acclimatised Carolina paddy-seed, forwarded to the Assistant Secretary to the Government of Bengal, Financial Department, with reference to his No. 3,539, dated 9th December 1874.

From J. S. ARMSTRONG, Esq., Collector of Pooree, to the Commissioner of Orissa, dated 16th March 1875, No. 1,051.

With reference to your, No. 255, dated 21st December last, I have the honor to forward a copy of Mr. Taylor's letter, No. 337, dated 13th instant, giving a circumstantial account of the history of the acclimatised Carolina paddy-seed, and to inform you that I have despatched the parcels of samples of the seeds referred to in the report direct to the Assistant Secretary to the Government of Bengal.

From W. C. TAYLOR, Esq., Deputy Collector of Poore, to the Collector of Pooree, dated 13th March 1875, No. 337.

With reference to your memorandum, No. 85, of the 8th January, forwarding letter, No. 3,539, from the Assistant Secretary to the Government of Bengal, dated the 9th December 1874, calling on me for a history of the Carolina paddy-seed tried by me at Khurda, I have the honor to report as follows.

In May 1871, Mr. Kirkwood, Revenue Superintendent of Canals at Cuttack, received some Carolina paddy-seed forwarded by the Executive Engineer of the 24-Pergunnahs Division. Mr. Kirkwood distributed 40 maunds of the seed in the same month, but no note can be found in his office that he gave any of that seed to me. He did, however, send me one barrel of South Carolina paddy-seed to try in Khurda, and I distributed the whole to ryots, with the exception of about one-half of a seer, which I sowed in my own garden.

The ryots sowed the seed given them on *sarud* or low paddy-lands, and the plants rotted from excess of water, and the experiments failed. The half seer sown in my garden germinated and grew well; but I observed that there was more than one sort of paddy in the crop. Some heads ripened much sooner than others; squirrels and rats did much damage; and I succeeded in getting only two and one-fourth seers of good, though mixed, seed.

2. Of the two and one-fourth seers of seed, two seers were sown again at the beginning of the rains of 1872 in a seed-bed in my own garden and germinated well. The young plants were then planted out on some rather highland not very rich, but commanded by water. The crop was damaged by blight, and I cut off the heads of paddy that first ripened, and which I found to be the ordinary long, rough, red grain, yielding white rice known as Carolina paddy (sample No. 4). There was also a small-grained variety which had heavy ears, and which ripened

*Sample No. 3.

early, and I picked off the heads as they ripened.* The rest of the crop was out late in November. Of the reddish grain and small light-colored grain I obtained about 10 seers, and the bulk of the

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crop yielded 170 seers; in all 180 seers, or ninetyfold of the seed planted out. In all I sorted out no less than sixteen varieties of paddy produce by my two seers of seed.

3. In 1872, I received 5 seers of seed from the Pooree Jail, also said to be acclimatised South Carolina paddy. This seed was sown broadcast on land adjoining, and similar to that on which the plants from the 2 seers of my own seed had been planted out. Only 50 per cent. of the Pooree seed germinated, and that also was injured by blight; but I obtained 75 seers or about thirtyfold of the seed that germinated.

In this sample I found ten or twelve sorts of paddy similar to some of the varieties produced by my own seed. This makes me think that the Pooree seed and my own seed must have come originally from the same source. You may be able to trace this from your jail records at Pooree.

4. I carefully sorted sixteen varieties of paddy from the crop of 1872, and two of the sorts proved very successful in 1873, as reported in my No. 227, of the 25th February 1874, of which the following is an extract:—

"Of one sort, yielding a fine rice of good color and flavor when cooked, and having a small yellow grain rather broad for its length, I could only pick out 1 seer in 1872 (see paragraph 2 of this letter), and this 1 seer was sown in a seed-bed in June 1873, and planted out in July on four *goonts*, or 3,036 square feet, of land. The yield in October was 161 seers, or 161 fold. The land on which this experiment was made was of medium quality, and only a few baskets-full of cow-house manure were applied. The ploughing was such as is ordinarily given by ryots, and the crop was irrigated two or three times, depending chiefly on the rain-fall. This variety is likely to prove very popular, as the yield is equal to the harvest yield in these parts of the late or *sarud dhan*, whilst it can be grown on highland; and it is an early crop not requiring much care or water.

"This crop grows to about three feet in height, and gives an ordinary outturn of straw. It does not require deep cultivation. This variety has obtained the name at Khurda of *tiki-dhan* or small paddy, and No. 3, accompanying this letter, is a sample."

5. Of the second variety, which proved successful in 1873, I reported as follows on the 25th February 1874:—

"Of the same sort of paddy 44 seers were partly sown and partly planted out on other lands which could obtain irrigation. No proper accounts of details were kept, as I said before, but the general result was a yield of fiftyfold on the seed used. Owing to deficient rain-fall sufficient irrigation could not be supplied. The mode of cultivation was ordinary for some parts of the land; there was only six inches of soil over laterite rock, and in other parts the soil was deep. This paddy does not appear to require a deep soil as the plants grow very strong and bushy, and attain a height of six and seven feet alike on the deep and on the shallow soils. I measured plants seven feet high on the six-inch soil. Planting out or sowing broadcast seemed to make very little difference. The yield of straw and grain is very good, and the rice white and of good quality, though rather coarse and large."

No. 2 is a sample of this variety of paddy, and No. 1 a sample of the same mixed with another sort, which, in the grain and on the field, is precisely like No. 2, but which will be found to yield a reddish brown or red rice.

6. The thirteen bales of seed supplied by me last year to Government were samples of the sorts noted above,—Nos. 1, 2, and 3. Some of this seed was sent to Burmah, where doubts were entertained of their being South Carolina paddy, as the appearance of the grain differs so materially from the South Carolina paddy usually distributed for experiment (see sample No. 4).

7. No. 4 is not suited for Orissa, as it requires very deep cultivation, and the grain adheres so tenaciously to the bulk that it is most difficult and troublesome to tread out or thresh, and the yield is not better than that of many local varieties much easier to cultivate. This grain has

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been nicknamed by the natives *badia*, or the one that is always being beaten, from the trouble it gives to thresh or tread out.

8 My experiments for 1874 have not been so successful as in 1873 Of No 2, mixed white and red, 41 seers were sown on 2 mans 22 goonts and 2 biswas of land, and yielded only about thirty-sixfold The plants were even finer than in 1872, but there was wind with rain when the crop was in flower which seriously affected the yield. Of No. 3, or small gram, I sowed 6 seers in a seed-bed and planted out on 1 man 5 goonts 12 biswas of land, getting a return of 518 seers or 86½ fold No. 4 failed, and did not recover even the seed sown.

9. The Khurda beegah measures 19,600 square feet.

25 Goonts = 1 Beegah.

16 Biswas = 1 Goont

P S — Samples by packet-post

From J. GEOGHEGAN, Esq, Officiating Secretary to the Board of Revenue, Lower Provinces, to the Secretary to the Government of Bengal, Financial Department, dated 2nd April 1875, No 192-A.

With reference to G O, No 3,537, dated 9th December last, I am directed to submit the

Hon V H SCHALCH, CSI
From the Commissioner of the Presidency Division,
No 8, M A, dated 29th March 1875
From the Commissioner of the Chota Nagpore Division,
No 762, dated 19th March 1875

accompanying copies of letters, with enclosures, from the Commissioners of the Presidency and Chota Nagpore divisions, reporting the results of the experiments made with the produce of the Carolina paddy sowing of 1873-74.

From LORD H ULICK BROWNE, Commissioner of the Presidency Division, to the Secretary to the Board of Revenue, Lower Provinces, dated 29th March 1875, No 8-MA

With reference to the Board's No 816-A, dated 22nd December 1874, and its enclosure, I have the honor to submit a statement in the prescribed form, showing the results of the experiments made with the produce of the Carolina paddy sown in the districts of this division in 1874.

2 In the twenty-four Pergunnahs the experiment was conducted on two plots of land situated on the north of the sub-divisional compound at Baraset, but the result was a total failure An explanation will be called for with reference to the statement that the crop failed partly on account of the rapid growth of weeds and grass, as the sub-divisional officer should have taken care that the weeds and grass were not allowed to grow.

3 The Collector of Nuddea reports that, among the several gentlemen who had undertaken the cultivation in 1873, one Zemindar alone succeeded in obtaining a small quantity of the paddy which he kept for seed; that this was tried last year, but without success.

4. In the district of Jessore, where the cultivation was undertaken by the Superintendent of the Jail, and by a number of ryots in the sub-division of Narrail, the experiments were attended with no better results than in the other two districts of this division.

5 Nothing has as yet been heard from the Commissioner in the Soonderbuns on the subject Mr Gomess has gone to Tooshkhally; and, as I do not know when his report may be expected, I do not like to detain the general report any longer.

6. It would appear from the experiments that there is no hope of raising the crop without artificial irrigation.

STATEMENT showing Results, &c, of the Cultivation of Carolina Paddy in the Districts of the Presidency Division in 1874

1	2	3	4	5	6	7	8	9
Division.	District	Name of the Person by whom the Experiment was made	The quantity of Seed sown.	Results of Experiment	How the Seed was sown.	How treated during Growth	What is the Yield	All Particulars connected with the Experiment generally.
Presidency	24-Pergunnahs	Sub-divisional officer at Baraset.	16 seers of acclimatised paddy.	Unsuccessful	The seed was sown broadcast	Nothing was done to the plants during growth	Nil	The seed was sown in two plots of low, clayey soil in the north of the sub divisional compound on July 7th and 10th, and having received the benefit of the rain-falls of July 10th, 12th, 13th, and 17th, the seed germinated in seven days. The seedlings received nourishment from the moisture of the rains that fell successively on July 21st, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, and 31st. At first they looked promising and attained the height of 18 inches by the end of August. Afterwards the rain fall was less frequent, and the plants began to lose their green color and gradually withered away, partly on account of want of sufficient moisture, and partly on account of the rapid growth of weeds and grass.
Ditto	Nuddea	Bahco Prosono Chunder Roy, Zc.	"	"	"	"	"	The seedlings dried up partly in the nursery, and, as there was no rain-fall until very late in the season, they could not be transplanted. The difficulty, as that no arrange ments for artificial irrigation was practicable in the field, where the experiment was carried on.
Ditto	Jessore	Superintendent of the Jail.	"	"	The seed was sown half in drills and half broadcast	"	"	The seed was kept in a carefully-covered earthen ghurrah and was sown on June 22nd 1874. The ground employed for the experiment was ordinary highland ploughed in the ordinary country fashion. The plants flourished as long as they were supplied with water from a neighbouring tank, which, however, soon dried up. The plants, which at one time attained a height of 22 inches, eventually perished from want of water.
Ditto	Ditto	Some of the ryots in the sub-division of Narrail.	"	"	The seed was sown broadcast	"	"	Previous to use the seed was kept in a large basket. The ground selected for the experiment was a clayey soil, well suited for the cultivation of paddy. It was ploughed in the ordinary native way, though with more than usual care. Unfortunately the plants were entirely destroyed by inundation.

H. ULICK BROWNE,
Commissioner.

COMMISSIONER'S OFFICE, PRESIDENCY DIVISION,
CALCUTTA,
29th March 1875

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From Captain C. H. GARBETT, Officiating Deputy Commissioner, Manbhoom, to the Commissioner of Chota Nagpore, dated 31st December 1874, No. 2,680.

With reference to your memorandum, No. 4,044, of the 25th instant, I have the honor to inform you that no experiment of cultivation of Carolina paddy has been made in this district during the current year.

Report of Result of Experiment with Carolina Paddy during 1873-74 in the Singbhoom District

No.	Names of Sowers	Seed Sown			Yield		
		MDS.	S	C.	MDS.	S	C.
1.	Joy Prokash Lall, Tahsildar ..	...	1	20	0	...	...
2.	Gunesh Chunder Tripatty..	...	0	6	0*	...	...
3.	Hury Pershad Ghose ..	...	0	1	0	0	2
4.	Deeno, ..	...	0	6	0		
5.	Dor ..	...	0	4	0		
6.	Pur ..	...	0	6	0		
7.	Chunder Mohun ...	...	1	20	0		

Endorsed by the Deputy Commissioner, Chyebassa, dated 22nd January 1875, No. 1,267

FORWARDED to the Commissioner of Chota Nagpore, with reference to his memorandum, No. 4,044, dated 25th December 1874.

From Colonel H. M. BODDAM, Deputy Commissioner of Hazareebagh, to the Commissioner of the Chota Nagpore Division, dated 16th March 1875, No. 233.

With reference to the correspondence as per margin, I have the honor to transmit herewith a statement showing the result of the Carolina rice-planting experiment

Commissioner's Memorandum, No. 4,044, of the 25th December 1874, forwarding Memorandum, No. 816-A, of the 22nd December 1874, from the Board of Revenue, giving cover to copy of letter, No. 8,537, dated the 9th December 1874, from the Assistant Secretary, Government of Bengal.

- 2 You will observe that it is a total failure
- 3 Your memoranda Nos 2,085 and 3,212, dated 30th June 1874 and 2nd October 1874,

respectively, were received here too late to be acted upon.

4 Moreover, I feel convinced that no native landholder in this district will give himself the trouble and exert himself personally to follow all the advices given by Mr. Robertson regarding selection of soil, site, and seed, unless he is fully satisfied in his own mind that the outturn from Carolina seed will exceed vastly that from country seed

5. Experimental farming, even in England, is only of very recent origin, and was commenced and carried out by highly-educated minds. Here we are very backward in education; the hereditary landed proprietors can scarcely do more than sign their own names. I fear it is almost hopeless to expect them, notwithstanding all the moral pressures the district officer may bring to bear on the subject, to take any personal interest in experimental farming for some time to come, when, with education, a change for the better may be expected

* The experiment has been a failure. I don't very much if proper care was given to its cultivation.

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Statement showing the Particulars of the Cultivation of Carolina Paddy

Name of Informant.	How sown and how treated during Growth.	Quantity produced.	Remarks.
1. Manager of Gawan Estate.	10 seers of the paddy was sown broadcast in well-prepared land	Nil	Failed utterly; gave no produce whatever
2. Thikadar of village Bamunbay.	About 8 seers of the paddy was sown broadcast in ploughed lands and otherwise well prepared for it.	18 seers	In an adjoining plot of land about 8 seers of the country rice was sown, which yielded 1 maund 32 seers of dhan.
3. Manager of Mondri Tea Plantation.	6 seers of seed sown in two different localities, viz, 3 seers at the top of the hill and 3 seers in the lands below, and every attention was paid to the cultivation.	5 seers	An utter failure on both plots.

H. M. BODDAM,
Deputy Commissioner.

Endorsed by Personal Assistant to Commissioner, Chota Nagpore, dated 19th March 1875, No. 762

Copy of the foregoing correspondence submitted through the Secretary to the Board of Revenue, Lower Provinces, Revenue Department, with reference to order, No. 816, of the 22nd December 1874.

No. 351.

ORDER THEREON, 29th

1875, No. 845.

Miscellaneous

COMMUNICATED to the Board of Revenue for information.

(True Extract)

(Signed)

A. MACGREGOR,
Acting Secretary to Government.

To the Board of Revenue.

Exd. F. R. Bantleman.

100/10/533/96

Obt. of 1875

REVENUE.

THE BOARD OF REVENUE

Date Mar. 29/75

MAY
No. 350-351

Communicating to the Board of Revenue, for information, letter from the Government of India forwarding a copy of report regarding the cultivation of — in Bengal.

7 Bd Pro 9 July 1875

No. 1416 A, dated 26th April 1875.

From—R. KNIGHT, Esq., Asst. Secy. to the Govt. of Bengal, Financial Dept.,
To—The Secy. to the Govt. of India, Dept. of Revenue, Agriculture and Commerce.

In continuation of this office letter No. 3541 of 19th December last, and Resolution No. 101 of the Government of India, dated 9th ultimo, on the subject of the cultivation of Carolina rice, I am directed to submit copy of the correspondence noted on the margin, with reference to paragraphs 3 and 5 of the letter, and paragraphs 2 and 4 of the Resolution above quoted.

2. The points noticed in these paragraphs are—(1), the results of the sowings of 1874-75 in the produce of 1873-74, (2), the statement by the Superintendent of the Ranchee Jail that the husk of this paddy is found to separate so readily from the grain, that it takes but the usual labour to clean it, and (3), Mr. Taylor's experiments in Pooree, with what he described as "acclimatised Carolina seeds of sorts, picked out from the crops obtained from seed received by him from the Superintendent of Canal Revenue three years ago."

3. With regard to the first of these points, His Excellency the Governor General in Council will observe that the experimental sowings of 1874-75 were a complete failure in the Presidency, Chittagong, and Chota-Nagpore Divisions; and these are the only reports that have as yet reached this Government.

4. As to the husking of the seed, Mr. Hoskins seems to have relied entirely on the testimony of the native gentleman who conducted the experiment, and he has no independent means of verifying his statement that this paddy is more easily husked than the indigenous one. The Lieutenant-Governor thinks there can be no doubt that the statement is an error.

5. As to the third point, I am to solicit the attention of His Excellency the Governor General in Council to the history which Mr. Taylor gives in the accompanying correspondence of the experiments, concerning which further enquiry was made of him in accordance with the Government of India's desire. Mr. Taylor's experiments began in 1871 with a barrel of seed given by him from the Superintendent of Revenue Canals. He states that he distributed whole of the seed to ryots with the exception of half a seer only, which he sowed in his garden. The ryots sowed on low paddy lands and failed completely, the plants rotting in excess of water. The history of the remaining half seer is of some importance. The seed germinated and grew well, but Mr. Taylor succeeded in getting only 2½ seers of paddy. He found, however, that there was more than one sort of paddy in the crop, and in sowed two seers of the yield at the beginning of the rains of 1872 in a seed-bed in his garden. The seed again germinated well, and the growth was planted out on rather high land, not very rich, but commanded by water. Although damaged by blight, the yield was fifty-fold the seed. Mr. Taylor found no fewer than 16 varieties of paddy in the produce of the two seers.

6. In the same year he seems to have sown five seers of seed received by him from the Ranchee Jail, described as "acclimatised South Carolina paddy," on land similar to that in which he transplanted the two seers of "seedlings" from his own garden. Of this seed only 10 per cent germinated, but, although half the seed was thus lost and the crop injured by blight, the yield was about sixteen-fold the seed sown. In this produce again Mr. Taylor found 12 different kinds of paddy, similar to some of the varieties produced from the two seers sown in his garden; and he not unreasonably concludes that the seed received by him from the Ranchee Jail in 1871, and in 1872 from the Pooree Jail, were originally from the same source.

7. From these two crops of 1872 he carefully sorted 16 varieties of paddy in all, and of these varieties proved strikingly successful in 1873. One of them, a small yellow rice of good colour and flavour, of which one seer was sown as before in a seed-bed in June 1873, yielded 161 seers produce.

The land was of medium quality only, enriched with a few baskets of cow-house manure. Ploughing was of the ordinary kind, and the crop depended mainly on the rainfall, being sown two or three times only. The plant grows about three feet high, gives an ordinary crop of straw, wants no deep cultivation, can be grown on high land, is an early crop, and requires neither much water nor much care. The variety is likely, says Mr. Taylor, to become popular, and it has obtained from the people at Khurda the name of *teki-dhan* or small paddy. A sample of this variety (marked No. 3) has been received by this office from Mr. Taylor, and is deposited in the Economic Museum.

8. Of the other variety sown in 1873, and which proved successful, 4½ seers were partly broadcast, it is presumed, and partly planted out. The general result was a yield of 101 seers of the seed. In this case again the paddy does not seem to require deep cultivation,

100/10/533/96

Obt. of 1875

REVENUE.

THE BOARD OF REVENUE

Date Mar. 29/75

MAY
No. 350-351

Communicating to the Board of Revenue, for information, letter from the Government of India forwarding a copy of report regarding the cultivation of — in Bengal.

7 Bd Pro 9 July 1875

No. 1416 A, dated 26th April 1875.

From—R. KNIGHT, Esq., Asst. Secy. to the Govt. of Bengal, Financial Dept.,
To—The Secy. to the Govt. of India, Dept. of Revenue, Agriculture and Commerce.

In continuation of this office letter No. 3541 of 19th December last, and Resolution No. 101 of the Government of India, dated 9th ultimo, on the subject of the cultivation of Carolina rice, I am directed to submit copy of the correspondence noted on the margin, with reference to paragraphs 3 and 5 of the letter, and paragraphs 2 and 4 of the Resolution above quoted.

2. The points noticed in these paragraphs are—(1), the results of the sowings of 1874-75 in the produce of 1873-74, (2), the statement by the Superintendent of the Ranchee Jail that the husk of this paddy is found to separate so readily from the grain, that it takes but the usual labour to clean it, and (3), Mr. Taylor's experiments in Pooree, with what he described as "acclimatised Carolina seeds of sorts, picked out from the crops obtained from seed received by him from the Superintendent of Canal Revenue three years ago"

3 With regard to the first of these points, His Excellency the Governor General in Council will observe that the experimental sowings of 1874-75 were a complete failure in the Presidency, Chittagong, and Chota-Nagpore Divisions; and these are the only reports that have as yet reached this Government.

4 As to the husking of the seed, Mr. Hoskins seems to have relied entirely on the testimony of the native gentleman who conducted the experiment, and he has no independent means of verifying his statement that this paddy is more easily husked than the indigenous one. The Lieutenant-Governor thinks there can be no doubt that the statement is an error.

5 As to the third point, I am to solicit the attention of His Excellency the Governor General in Council to the history which Mr. Taylor gives in the accompanying correspondence of the experiments, concerning which further enquiry was made of him in accordance with the Government of India's desire. Mr. Taylor's experiments began in 1871 with a barrel of seed given by him from the Superintendent of Revenue Canals. He states that he distributed whole of the seed to ryots with the exception of half a seer only, which he sowed in his garden. The ryots sowed on low paddy lands and failed completely, the plants rotting in excess of water. The history of the remaining half seer is of some importance. The seed germinated and grew well, but Mr. Taylor succeeded in getting only 2½ seers of paddy. He found, however, that there was more than one sort of paddy in the crop, and in sowed two seers of the yield at the beginning of the rains of 1872 in a seed-bed in his garden. The seed again germinated well, and the growth was planted out on rather high land, not very rich, but commanded by water. Although damaged by blight, the yield was twenty-fold the seed. Mr. Taylor found no fewer than 16 varieties of paddy in the produce of the two seers.

6. In the same year he seems to have sown five seers of seed received by him from the Ranchee Jail, described as "acclimatised South Carolina paddy," on land similar to that in which he transplanted the two seers of "seedlings" from his own garden. Of this seed only 10 per cent germinated, but, although half the seed was thus lost and the crop injured by blight, the yield was about sixteen-fold the seed sown. In this produce again Mr. Taylor found 12 different kinds of paddy, similar to some of the varieties produced from the two seers sown in his garden; and he not unreasonably concludes that the seed received by him from the Ranchee Jail in 1871, and in 1872 from the Pooree Jail, were originally from the same source.

7. From these two crops of 1872 he carefully sorted 16 varieties of paddy in all, and of these varieties proved strikingly successful in 1873. One of them, a small yellow rice of good colour and flavour, of which one seer was sown as before in a seed-bed in June 1873, yielded 161 seers produce.

The land was of medium quality only, enriched with a few baskets of cow-house manure. Ploughing was of the ordinary kind, and the crop depended mainly on the rainfall, being sown two or three times only. The plant grows about three feet high, gives an ordinary crop of straw, wants no deep cultivation, can be grown on high land, is an early crop, and requires neither much water nor much care. The variety is likely, says Mr. Taylor, to become popular, and it has obtained from the people at Khurda the name of *teki-dhan* or small paddy. A sample of this variety (marked No. 3) has been received by this office from Mr. Taylor, and is deposited in the Economic Museum.

8. Of the other variety sown in 1873, and which proved successful, 4½ seers were partly broadcast, it is presumed, and partly planted out. The general result was a yield of 101 seers of the seed. In this case again the paddy does not seem to require deep cultivation,

the plants growing equally well in six inches of soil and in deep mould. Mr. Taylor measured plants seven feet high on the six-inch soil. Planting out, or sowing broadcast, seemed to make very little difference in the yield, which was very good, both of grain and straw. The rice is white and of good quality, though rather coarse and large. In this instance no irrigation was possible owing to the deficient rainfall, and the experiment is very encouraging.

Two samples of this variety (Nos 1 and 2) have been received from Mr Taylor, and will be deposited with the other in the Museum.

9 Mr. Taylor notices the fact that it was from the produce of these two successful experiments of 1873 that the Burmah Administration was supplied with acclimatised Carolina seed last year, concerning which doubts were expressed by the Chief Commissioner as to whether it really was Carolina paddy at all.

10. The South Carolina paddy usually distributed for experiment, and of which Mr Taylor submits a sample (No 4), requires, he says, very deep cultivation, and is not suited for Orissa. The grain is most troublesome more over to thrash, while the yield is no larger than that of many indigenous varieties much easier to cultivate.

11. Mr Taylor's experiments in the last year (1874) were not so successful as those of 1873, but the plants were very fine; and sample No. 2, sown broadcast, yielded a 36 fold return, and the No 3 variety, or *thi-dha*, transplanted 86 fold, while No 4, the pure Carolina variety, failed altogether.

12. Upon the whole, the Lieutenant-Governor is disposed to think that these experiments of Mr. Taylor's are perhaps the most encouraging and the most important that have yet been recorded in this matter in Bengal. They seem to point to the conclusion that, amongst the numerous varieties of seed which have been imported by Government as South Carolina, there are at least two descriptions of grains to which the soil and climate of Orissa are peculiarly adapted. The seed seems to succeed almost equally well, whether transplanted or sown broadcast, to want no peculiar cultivation; to be nearly independent of irrigation, to ripen early, to require moderately high land only, commanded if possible by water; and to yield a heavy return of fine grain and good straw.

13 Mr Taylor, I am directed to say, will be requested to follow up these experiments carefully. It is deemed better for the present to confine them to Orissa, the soil and climate of which appear to be so favourable to their success. Should the present year's sowings again prove successful, an effort should, the Lieutenant-Governor thinks, be made to diffuse the cultivation further.

No 161 A., dated 29th March 1875.

Endorsed by the Offg. Secy. to the Board of Revenue, Lower Provinces

Copy of the following submitted to the Government of Bengal, Financial Department, with reference to Government order No 3537, dated 9th December last.

No 619 G.C., dated 13th March 1875.

From—E. E. Lewis, Esq., Commissioner of the Chittagong Division,

To—The Secretary to the Board of Revenue, Lower Provinces.

With reference to the orders of Government No. 3537, dated the 9th December last, forwarded under cover of your office memorandum No. 816 A, dated the 22nd idem, I have the honour to submit the following report.

2 The Collector of Chittagong states that "of the two gentlemen who cultivated the Carolina paddy in 1873-74 with any success, the Court of Wards' Manager made the experiment during the last season with his produce, but the seed did not germinate at all. No information has been received from Mr. Macalpine (the other successful cultivator), who is now away from the district."

3. The Collector of Tipperah reports that in two cases only experiments were made last season with the produce of 1873-74. In one case an outturn of 5 seers 15 chittacks was obtained from 2 seers of seed sown, and in the other the experiment proved an entire failure, owing, it is said, to the heavy rains which fell in May last.

4 It appears from the report received from the Collector of Noakhally that only 13 seers of paddy of the previous year's produce were available for experiment in the year, 1874-75. Of this quantity, 10 seers were given to the Superintendent of the Jail for experiment in the jail garden; but most of the seed was without vitality, and only two and a half seers, though not of any good quality, were fit for sowing. This quantity was, it is reported, sown with all necessary care and transplanted, and the crop was reaped in November, the outturn being 1 maund 2 seers of paddy.

5 The remaining 3 seers of the seed were delivered to the Superintendent of the Bhulloah Estate for experiment, of which 1 seer was found to be mere husk, and 2 seers only were fit for sowing. He appears to have made his experiment in two kinds of land (high and low), sowing 1 seer on each description of land. It is reported, however, that only 10 per cent. of the seed germinated, the yield on the high land being 4 seers and on the low land being 1½ seers only.

6 The Collector of Noakhally further reports that, adjoining the two plots mentioned in the foregoing paragraph on which Carolina paddy was sown, two other pieces of land were sown with an equal quantity of country paddy. After taking the same care and going through the same process, it is stated that the country paddy grew much thicker and stronger, and that the seedlings of the two kinds of paddy were then transplanted.

7. "The Carolina occupied," to quote from the Collector's report, "an area of 10 x 7 feet out of its two plots, the rest remaining fallow, owing to insufficiency of seedlings, and the country paddy was planted out to the full on the two areas of 31 x 21 feet respectively. The outturn of the former was 4 seers in the high and 1½ seers on the low land, while the latter yielded 21 seers in each of the two plots where it was transplanted. From this it appears that the cultivation of the Carolina paddy almost entirely failed on the low land, while on the high land the result is not satisfactory, as in proportion to the respective areas under cultivation. The yield on the high land was 12 seers of Carolina paddy against 21 seers of country paddy, the Carolina paddy land being about one-third of the country paddy land."

8. None of the district officers have made any remarks as to the identification of the seed.

No. 350, dated 23rd March 1875.

Endorsed by the Persl Asst to Commr., Orissa Division.

COPIES of Collector of Pooree's letter No 1051, dated 16th March 1875, and its enclosure No. 337, dated 13th March 1875, from Mr. W. C. Taylor, Deputy Collector, Khurda, giving a circumstantial account of the history of acclimatised Carolina paddy seed, forwarded to the Assistant Secretary to the Government of Bengal, Financial Department, with reference to his No. 3539, dated 9th December 1874.

No. 1051, dated 16th March 1875.

From—J. S. ARMSTRONG, Esq., Collector of Pooree,
To—The Commissioner of Orissa.

With reference to your No 255, dated 21st December last, I have the honour to forward copy of Mr. Taylor's letter No 337, dated 13th instant, giving a circumstantial account of the history of the acclimatised Carolina paddy seed, and to inform you that I have despatched the parcels of samples of the seeds referred to in the report direct to the Assistant Secretary to the Government of Bengal.

No 337, dated 13th March 1875.

From—W. C. TAYLOR, Esq., Deputy Collector of Pooree,
To—The Collector of Pooree.

With reference to your memorandum No. 855 of the 8th January, forwarding letter No 3539 from the Assistant Secretary to the Government of Bengal, dated the 9th December 1874, calling on me for a history of the Carolina paddy seed tried by me at Khurda, I have the honour to report as follows

In May 1871, Mr. Kirkwood, Revenue Superintendent of Canals at Cuttack, received some Carolina paddy seed forwarded by the Executive Engineer of the 24-Pergunnahs Division. Mr. Kirkwood distributed 40 maunds of the seed in the same month, but no note can be found in his office that he gave any of that seed to me. He did, however, send me one barrel of South Carolina paddy seed to try in Khurda, and I distributed the whole to ryots, with the exception of about one-half of a seer, which I sowed in my own garden.

The ryots sowed the seed given them on *sarai* or low paddy lands, and the plants rotted from excess of water, and the experiments failed. The half seer sown in my garden germinated and grew well; but I observed that there was more than one sort of paddy in the crop. Some heads ripened much sooner than others; squirrels and rats did much damage, and I succeeded in getting only two and one-fourth seers of good, though mixed, seed.

2 Of the two and one-fourth seers of seed, two seers were sown again at the beginning of the rains of 1872 in a seed-bed in my own garden and germinated well. The young plants were then planted out on some rather high land not very rich, but commanded by water. The

crop was damaged by blight; and I cut off the heads of paddy that first ripened, and which I found to be the ordinary long, rough, red grain, yielding white rice known as Carolina paddy (sample No. 4). There was also a small-grained variety which

* Sample No 3 had heavy ears, and which ripened early, and I picked off the heads as they ripened. The rest of the crop was cut late in November. Of the reddish grain and small light-colored grain I obtained about 10 seers, and the bulk of the crop yielded 170 seers, in all 180 seers, or ninety-fold of the seed planted out. In all I sorted out no less than 16 varieties of paddy produced by my two seers of seed.

3 In 1872 I received five seers of seed from the Pooree jail, also said to be acclimatised South Carolina paddy. This seed was sown broadcast on land adjoining, and similar to that on which the plants from the two seers of my own seed had been planted out. Only 50 per cent of the Pooree seed germinated, and that also was injured by blight; but I obtained 75 seers or about thirty-fold of the seed that germinated.

In this sample I found 10 or 12 sorts of paddy similar to some of the varieties produced by my own seed. This makes me think that the Pooree seed and my own seed must have come originally from the same source. You may be able to trace this from your jail records at Pooree.

4 I carefully sorted 16 varieties of paddy from the crop of 1872, and two of the sorts proved very successful in 1873, as reported in my No. 227 of the 25th February 1874, of which the following is an extract—

"Of one sort, yielding a fine rice of good colour and flavor when cooked, and having a small yellow grain rather broad for its length, I could only pick out one seer in 1872 (see paragraph 2 of this letter), and this one seer was sown in a seed-bed in June 1873, and planted out in July on four *goonts*, or 3,036 square feet, of land. The yield in October was 161 seers, or 161 fold. The land on which this experiment was made was of medium quality, and only a few baskets full of cow-house manure were applied. The ploughing was such as is ordinarily given by ryots, and the crop was irrigated two or three times, depending chiefly on the rainfall. This variety is likely to prove very popular, as the yield is equal to the harvest yield in these parts of the late or *sarud dhan*, whilst it can be grown on high land, and it is an early crop, not requiring much care or water."

"This crop grows to about three feet in height, and gives an ordinary outturn of straw. It does not require deep cultivation. This variety has obtained the name at Khurda of *tiki-dhan*, or small paddy, and No 3, accompanying this letter, is a sample."

5. Of the second variety, which proved successful in 1873, I reported as follows on the 25th February 1874—

"Of the same sort of paddy 41 seers were partly sown and partly planted out on other lands which could obtain irrigation. No proper accounts of details were kept, as I said before, but the general result was a yield of fifty-fold on the seed used. Owing to deficient rainfall sufficient irrigation could not be supplied. The mode of cultivation was ordinary for some parts of the land; there was only six inches of soil over laterite rock, and in other parts the soil was deep. This paddy does not appear to require a deep soil as the plants grow very strong and bushy, and attain a height of six and seven feet alike on the deep and on the shallow soils. I measured plants seven feet high on the six-inch soil. Planting out or sowing broadcast seemed to make very little difference. The yield of straw and grain is very good, and the rice white and of good quality, though rather coarse and large."

No. 2 is a sample of this variety of paddy, and No 1 a sample of the same mixed with another sort, which in the grain and on the field is precisely like No. 2, but which will be found to yield a reddish-brown or red rice.

6 The 13 bales of seed supplied by me last year to Government were samples of the sorts noted above—Nos 1, 2 and 3. Some of this seed was sent to Burmah, where doubts were entertained of their being South Carolina paddy, as the appearance of the grain differs so materially from the South Carolina paddy usually distributed for experiment. (See sample No. 4)

7. No. 4 is not suited for Orissa, as it requires very deep cultivation, and the grain adheres so tenaciously to the bulk that it is most difficult and troublesome to tread out or thresh, and the yield is not better than that of many local varieties much easier to cultivate. This grain has been nicknamed by the natives *badia*, or the one that is always being beaten, from the trouble it gives to thresh or tread out.

8. My experiments for 1874 have not been so successful as in 1873. Of No. 2, mixed white and red, 41 seers were sown on 2 man's 22 *goonts* and 2 *biswas* of land, and yielded only about 36 fold. The plants were even finer than in 1872; but there was wind with rain when the crop was in flower which seriously affected the yield. Of No 3 or small grain I sowed six seers in a seed-bed and planted out on 1 man 5 *goonts* 12 *biswas* of land, getting a return of 518 seers or 86½ fold. No. 4 failed, and I did not recover even the seed sown

9. The Khurda beegah measures 19 600 square feet.

25 *Goonts* = 1 *Beegah*.
16 *Biswas* = 1 *Goont*

P S—Samples by packet-post

No 192 A, dated 2nd April 1875

From—J. GEOGHEGAN, Esq, Offg Secy to the Board of Revenue, Lower Provinces,
To—The Secretary to the Govt. of Bengal, Financial Dept

With reference to Government order No. 3537, dated 9th December last, I am directed to submit the accompanying copies of letters, with enclosures, from the Commissioners of the Presidency and Chota Nagpore divisions, reporting the results of the experiments made with the produce of the Carolina paddy sowing of 1873-74

HON'BLE V. H. SCHALCH, C.S.I.
From the Commissioner of the Presidency Division
No 8 MA, dated 29th March 1875.
From the Commissioner of the Chota Nagpore Division
No 762, dated 19th March 1875.

No 8 M-A, dated 29th March 1875.

From—LORD H. ULICK BROWN, Commissioner of the Presidency Division,
To—The Secretary to the Board of Revenue, Lower Provinces.

With reference to the Board's No. 816 A, dated 22nd December 1874, and its enclosure, I have the honour to submit a statement in the prescribed form, showing the results of the experiments made with the produce of the Carolina paddy sown in the districts of this division in 1874

2. In the 24-Pergunnahs the experiment was conducted on two plots of land situated on the north of the sub-divisional compound at Baraset, but the result was a total failure. An explanation will be called for with reference to the statement that the crop failed partly on account of the rapid growth of weeds and grass, as the sub-divisional officer should have taken care that the weeds and grass were not allowed to grow.

3 The Collector of Nuddea reports that, among the several gentlemen who had undertaken the cultivation in 1873, one zemindar alone succeeded in obtaining a small quantity of the paddy, which he kept for seed, that this was tried last year, but without success.

4 In the district of Jessore, where the cultivation was undertaken by the Superintendent of the Jail, and by a number of ryots in the sub-division of Narrail, the experiments were attended with no better results than in the other two districts of this division.

5. Nothing has as yet been heard from the Commissioner in the Soonderbuns on the subject. Mr. Gomess has gone to Tooshkhally, and, as I do not know when his report may be expected, I do not like to detain the general report any longer.

6. It would appear from the experiments that there is no hope of raising the crop without artificial irrigation.

Statement showing results, &c., of the cultivation of Carolina Paddy in the Districts of the Presidency Division in 1874

1	2	3	4	5	6	7	8	9
Division	District	Name of the person by whom the experiment was made	The quantity of seed sown	Results of experiment	How the seed was sown	How treated during growth	What is the yield	All particulars connected with the experiment generally
Presidency	24 Pergunnahs	Sub divisional officer at Baraset	16 acres of acclimatised paddy	Unsuccessful	The seed was sown broadcast	Nothing was done to the plants during growth	Nil	The seed was sown in two plots of low, clayey soil in the north of the sub divisional compound on July 7th and 10th, and having received the benefit of the rainfalls of July 10th, 12th, 13th and 17th, the seed germinated in seven days. The seedlings received nourishment from the moisture of the rains that fell successively on July 21st, 23rd, 24th, 25th, 26th, 27th, 28th, 29th and 31st. At first they looked promising and attained the height of 18 inches by the end of August. Afterwards the rainfall was less frequent and the plants began to lose their green colour and gradually withered away, partly on account of want of sufficient moisture, and partly on account of the rapid growth of weeds and grass. The seedlings died up partly in the nursery, and, as there was no rain-fall until very late in the season, they could not be transplanted. The difficulty was that no arrangements for artificial irrigation was practicable in the fields where the experiment was carried on. The seed was kept in a carefully covered earthen ghurrak as it was sown on June 22nd, 1874. The ground employed for the experiment was ordinary high land, ploughed in the ordinary country fashion. The plants flourished as long as they were supplied with water from a neighbouring tank, which however soon dried up. The plants, which at one time attained a height of 22 inches, eventually perished from want of water. Previous to use the seed was kept in a large basket. The ground selected for the experiment was a clayey soil, well suited for the cultivation of paddy. It was ploughed in the ordinary native way, though with more than usual care. Unfortunately the plants were entirely destroyed by inundation.
Ditto	Nudda	Bahoo Chunder Roy, Zamindar			The seed was sown half in drills, and half broadcast			
Ditto	Jessore	Superintendent of the Jail			The seed was sown broadcast			
Ditto	Ditto	Some of the riots in the sub-division of Nairai						

COMMISSIONER'S OFFICE, PRESIDENCY DIVISION, CALCUTTA, The 29th March 1875

H. ULICK-GROWNE,

Commissioner

(7)

No. 277, dated 31st December 1874

From—CAPTAIN C. H. GARRETT, Offg. Deputy Commissioner, Manbhoom,
To—The Commissioner of Chota Nagpore

With reference to your memorandum No. 4044 of the 25th instant, I have the honour to inform you that no experiment of cultivation of Carolina paddy has been made in this district during the current year

Report of result of experiment with Carolina paddy during 1873-74 in the Singhbhum District.

No	Names of sowers	Seed sown			Yield		
		Mds	S	C	Mds	S	C
1.	Joy Prokash Lall, Tehsildar	...	1	20	0	...	...
2.	Gunesh Chunder Iripatty	...	0	6	0*	...	...
3.	Hury Pershad Ghose	...	0	1	0	0	2
4.	Deenoo Perdhun	...	0	6	0	...	...
5.	Domoo Dass	...	0	4	0	...	...
6.	Purgunna Manki	...	0	6	0	...	...
7.	Chunder Mohun	...	0	20	0	...	...

* The experiment has been a failure. I doubt very much if proper care was given to its cultivation.

No. 1267, dated 22nd January 1875.

Endorsed by the Deputy Commissioner, Chyebassa.

FORWARDED to the Commissioner of Chota Nagpore, with reference to his memorandum No. 4044, dated 25th December 1874.

No. 233, dated 16th March 1875.

From—COLONEL H. M. BODDAM, Deputy Commissioner of Hazareebagh,
To—The Commissioner of the Chota Nagpore Division.

With reference to the correspondence as per margin, I have the honour to transmit herewith a statement showing the result of the Carolina rice-planting experiment
2. You will observe that it is a total failure.

3. Your memoranda Nos 2093 and 3212, dated 30th June 1874 and 2nd October 1874 respectively, were received here too late to be acted upon.

4. Moreover, I feel convinced that no native landholder in this district will give himself the trouble and exert himself personally to follow all the advices given by Mr. Robertson regarding selection of soil, site, and seed, unless he is fully satisfied in his own mind that the outturn from Carolina seed will exceed vastly that from country seed.

5. Experimental farming, even in England, is only of very recent origin, and was commenced and carried out by highly educated minds. Here we are very backward in education, the hereditary landed proprietors can scarcely do more than sign their own names. I fear it is almost hopeless to expect them, notwithstanding all the moral pressures the district officer may bring to bear on the subject, to take any personal interest in experimental farming for some time to come, when with education a change for the better may be expected.

Statement showing the particulars of the cultivation of Carolina Paddy.

Name of informant.	How sown and how treated during growth	Quantity produced	REMARKS
1. Manager of Gawan Estate	10 seers of the paddy was sown broadcast in well prepared land	<i>Nil</i>	Failed utterly, gave no produce whatever.
2. Thikadar of village Bammunbay	About 8 seers of the paddy was sown broadcast in ploughed lands and otherwise well prepared for it.	18 seers	In an adjoining plot of land about 8 seers of the country rice was sown, which yielded 1 maund 32 seers of <i>dhan</i> .
3. Manager of Mond Tea Plantation	6 seers of seed sown in two different localities, viz 3 seers at the top of the hill and 3 seers in the lands below, and every attention was paid to the cultivation.	5 seers	An utter failure on both plots

H. M. BODDAM,
Deputy Commissioner.

No 762, dated 19th March 1875

Endorsed by Personal Assistant to Commissioner, Chota Nagpore.

Copy of the foregoing correspondence submitted through the Secretary to the Board of Revenue, Lower Provinces, Revenue Department, for the information of the Member-in-charge, with reference to order No. 816 of the 22nd December 1874.

Exd.—F. J. B.

1875.

DEPARTMENT OF REVENUE,
AGRICULTURE, AND COMMERCE

AGRICULTURE AND HORTICULTURE

FROM

THE GOVERNMENT OF BENGAL.

No. 1416
4 Enclosures.
5 Spare Copies
of letter only.

Dated 26th April.

Recd 3rd May.

D. No. 334

L. No 327

Progs { No

Recd 20/5/75

SUBJECT.

In continuation of No. 3541, dated 19th December last, forwards a copy of correspondence on the subject of the cultivation of Carolina rice in Bengal.

No. ²/₁₇₄

FROM

C. J. LYALL, ESQUIRE,

Under Secretary to the Government of India,

TO

The Secretary to the Government
of Madras

Department of Revenue,
Agriculture, and Commerce
(Agriculture and Horticulture)

SIMLA, the 14th May 1875

SIR,

I AM directed to forward herewith, for the information of
the Acting Governor in Council, copy of a letter from the
Government of Bengal No. 1416, dated the 26th ultimo, together with copy
of a report furnished by Mr. W. C. Taylor, Deputy Collector of Pooree, on
some experiments made with Carolina paddy seed in Khurda.

2 It will be observed that some of the varieties found by Mr. Taylor to
exist in the seed furnished to him as Carolina paddy have proved strikingly
successful in Orissa, and I am to enquire whether the paddy seed has elsewhere
been found to contain more than one sort of seed-rice.

I have the honour to be,

SIR,

Your most obedient Servant,

Chas. Lyall

Under Secretary to the Government of India.

1875.

DEPARTMENT OF REVENUE,
AGRICULTURE, AND COMMERCE.

AGRICULTURE AND HORTICULTURE

To

No $\frac{2}{174}$

Dated Simla, the 14th May 1875.

And - 28 - n

E. 1

14 L. H. 2. Board of Revenue, 16 June

SUBJECT.

FORWARDS a copy of papers on the subject of ex-
periments made with Carolina paddy in Bengal.

*N^o 845 Communicated to
the Board of Revenue for
information.*