M.R.O. 14—5,450—22-10-25.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 1576 Press ~~Mis.~~

289 2 26

Dated 13 — 2 — 1867.

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department, 13th July 1867.

No. 219. Read the following Proceedings of the Board of Revenue :—

Submitting, with remarks, letter from Collector of Malabar, *forwarding reports of Sub-Collector* and Mr. Brown on cultivation of Carolina paddy in the sub-division of district. } (Here enter 3rd July 1867, No. 4,143.)

No. 220. ORDER THEREON, 13th July 1867, No. 1,560.

Miscellaneous.

Ordered that the reports be forwarded for the information of the Secretary of State.

(True Extract.)

Secretary to Government.

To the Board of Revenue.

Exd. S. T. Augustin.

No. 4,143.

Proceedings of the Board of Revenue, dated 3rd July 1867.

ad the following letter from J. C. HANNYNGTON, Esq., Acting Collector of Malabar, to the Secretary to the Board of Revenue, dated Calicut, 23rd May 1867, No. 107:—

1. I have the honour to submit the report of the Sub-Collector of this district on the experiital cultivation of Carolina paddy made last season in his division, and a memorandum on the ne subject by Mr. Brown, of Anjerakundy.

2. These reports came to hand only recently. No particular note was taken of the three 'erent kinds of Carolina seed forwarded to the Collector last year, and I am, therefore, unable to nish the information called for in the latter part of paragraph 2 of the Board's Proceedings, dated t March 1867, No. 1,749.

Enclosure No. 1.

m W. LOGAN, Esq., Sub-Collector of Malabar, to the Acting Collector of Malabar, dated Tellicherry, 4th May 1867, No. 94.

1. I have the honour to submit, in a tabular form, the results of the experiments made in this sion, during the last season, in the cultivation of the Carolina paddy sent to Mr. Thomas for ribution, with Mr. Ballard's Memorandum, No. 1,565, dated 17th May 1866; the account of each riment is given in the column of remarks, with the exception of the memorandum by Mr. Brown, Anjerakandy, which I enclose separately in original.

2. The experiments were, I think, pretty successful, considering the ignorance of the indials who made the experiments with regard to the best mode of cultivation, and the best soil ted to the growth of the plant. All soils have been tested: common rice lands, garden land, dry parumba lands. The seed was sown broadcast, and in beds, and the plants were in some ances transplanted, and in others left in the beds in which they were first sown.

3. The Statement herewith sent gives all necessary particulars of each individual experiment; judging from the results, and from my experience, I consider that its wonderful power of propa- n from the growing stem is the chief characteristic of the plant. I noticed invariably in the riments conducted in the Head Assistant's Division, that one seedling of the Carolina paddy w out as many shoots when transplanted as three or more seedlings of common paddy. In the riment conducted under my personal observation at Paulghaut, I made the mistake of planting r three Carolina paddy seedlings together as is usually done with common paddy seedlings, and I that in consequence there was no room for the immense number of shoots thrown out by the rous action of the plants. I was of opinion that had I transplanted the seedlings singly I could planted at least twice the extent of ground, and have obtained at least double the produce dly reaped. The Tahsildar of Valluvanad transplanted the seedlings singly in an experiment ted by him, and with astonishing results. I had left the Head Assistant's Division before the t of the experiment was known, but I am informed that less than one measure of seed produced wer than 160 measures of good paddy; it was, the Tahsildar informed me, a sample produced

in this experiment that gained the first prize for Carolina paddy at the late Calicut Exhibition. A comparison of the results of the experiments now submitted seems to point to the same conclusions, viz., that there is an immense saving of seed by using Carolina paddy, and that a loss is caused by planting Carolina paddy seedlings as thickly as common paddy seedlings. In No. 1 experiment, one Nay measure of seed was sown broadcast over 385 superficial feet of soil, and the result was an outturn of six seers, *i. e.*, twenty-four times the quantity of seed sown, a very fair outturn indeed. In Experiment No. 2, double the quantity of seed, viz., two Nay measures, was sown in beds and then transplanted, the extent of ground thus planted being 180 superficial feet: the outturn was only two seers, or only four times the quantity of seed sown. In experiment No. 3 the result is even more convincing, one ayak or ½ of a seer of paddy was sown in beds, and then transplanted to a piece of land 324 superficial feet in extent the *outturn** was 6 seers, or 192 times the quantity of seed sown. In experiment No. 17, four ayaks of seed were sown in beds and the seedlings transplanted to 346½ superficial feet of wet land; the outturn was three seers, or twenty-four times the quantity of seed sown. Experiment No. 18, showed somewhat similar results. On the other hand, however, Mr. Brown's experiment and Experiment No. 16 did not give such favourable results; in the one case half a seer was sown broadcast on 2,000 superficial feet of irrigated land, and the outturn was only 2½ seers of *good* seed, and in the other 2½ ayaks were sown in beds, and the seedlings transplanted to 216 superficial feet of Nunjah land; the outturn was only half a seer, or about six times the quantity of seed sown. As the other experiments were conducted on dry soils their results cannot, of course, be taken into consideration.

* This outturn was from land of similar quality to that on which Experiment No. 1 was conducted.

4. As to the question whether it is best to sow Carolina paddy broadcast, or to transplant it from seed-beds, I remark that, as appears from the papers lately circulated, the former is the natural habit of the plant, but that it thrives very well when transplanted. I have not received the results of any experiment; but judging from the appearance of the crop on the ground, I am inclined to think that, under similar circumstances, the outturn from a transplanted crop would be larger than that from a crop raised from seed scattered broadcast.

5. Another thing which I have observed, and which may perhaps be thought too obvious to be mentioned, is that with this as with other paddies, the best alluvial soil produces the best crops. I mention this fact because I find that an erroneous opinion on this subject prevails very generally in this district, chiefly, I think, on account of the publication in the District Gazette of the results of Mr. Whiteside's experiment in South Arcot, in which Carolina paddy seed sown on "Dry sandy soil," "Waste for many years," produced such wonderful results.

6. Experiments Nos. 5 to 15 inclusive were made by sowing the seed on lands not artificially irrigated, and so far as their results can be trusted were not satisfactory. This, however, was most probably due to the exceptional nature of last season, and though the experiments so far do not uphold *Mr. Forbes's theory*† that the plant will thrive well on the high-lying *anicut* paddy lands of this district, I do not consider that the results obtained establish the contrary. The column of remarks contains the Tahsildars' opinions, and you will observe that the Tahsildar of Kurumbranad, who himself conducted an experiment, thinks "it will produce abundantly in Punjah land," and the Tahsildar of Kottayam is of opinion that it "will bear very well in Poumu land." I received the paddy sent to me with your Memorandum, No. 966, dated 20th ultimo, and will take care that experiments are instituted to settle this point.

† Vide Govt. Proc., R. D., No. 573, dated 8th March 1867.

7. Mr. Pereira reports, (*vide Experiment No. 6,*) that the plants he sowed on a "rather dry sandy soil" were eaten at the root by white-ants.

8. The ride is much esteemed by natives as an article of food. Moplahs especially say it is peculiarly well-adapted for their favourite dish of Ney choru.

9. This report has been much delayed through some misunderstanding of the form of Statement.

Statement showing the result of the cultivation of Carolina Paddy in the Sub-division of Malabar.

Enclosure No. 2

Taluk.		Name of cultivator.	Extent sown.	Date of sowing.	Kind of soil.	Ancient sown.	Extent sown.	Date of sowing.	Broadcast or in beds.	If trans-planted, Date.	Area occupied by crop.	Days, reckoned from sowing, when ripe.	When cut.	Outturn. Seers.	Remarks.
Ottapalam	1.	Kattoor	1 Nay	1st July 1866.	Red sandy.	Nay 1	238	26th June 1866.	In beds	1st July 1866.	153	120	23rd October 1866.	6	In the manner of its growth, passing forth leaves, flowering, &c., Carolina paddy is not found to be different to the paddy grown of Malabar. The soil suits this grain very well. The outturn was somewhat more than the country paddy.
	2.	Kidey	½ Nay	21st July 1866.	Paddy wet land.	4th Nay 1866.	238	26th June 1866.	Do.	30th Aug. 1866.	18	130	14th October 1866.	2	This Carolina paddy was sown in the season when Kayam paddy is usually sown in this part of the country. Before germination the seed was properly steeped. The outturn is more than four times the quantity sown.
	3.	Do.	1 Ayak	26th June 1866.	Paddy wet land.	3	Ayak 1	26th June 1866.	Broadcast.	8th Aug. 1866.	12	127	2nd October 1866.	6	The crop was large, and the seed appeared to be of good quality. There was an outturn of 20 fold. Double the usual quantity of seed was sown. The paddy-seeds failed, and the ears with but few grains, were generally destroyed by cattle, the remainder being scarcely worth reaping, which one-fourth has been produced.
	4.	Tarwad thatan Nayar.	Was not sowed.		Light red and black sandy mixed gravelly soil.	Ekangali	Was not sowed.		In beds	1st July 1866.	12	124	25th September 1866.	4½	The unseasonable succession having set in so late, the experiment could not be carried on to a large scale, and to give the Carolina paddy a fair trial both as regards its ordinary country paddy, for which purpose a piece of proper paddy land was taken promised to me.
	5.	Sankaran Nayar.	2 Nay measures.		Light dry sandy soil.	2 Nay measures.	20	2nd June 1866.	In beds	1st July 1866.	27	150	15 November.	6	The extent of the land alluded to in the Column 1 and 2, under the Heading "Area occupied by crop," was thus worded thus for ease. Proper manured, and then sown. The germinated seed was sown 5 inches apart, and all turned. Some the plants, when grown to the height of two feet, and the latter end of August, were destroyed at the root by white-ants. The planting up to the date of reaping were not three feet high. The outturn 15 Nay mea-
Kottayam.	6.	Pereira.	Rather dry sandy soil.	2nd June 1866.	Red sandy.	Nay 1	238	4th June 1866.	Broadcast.	8th Aug. 1866.	12	124	25th September 1866.	4	The experiment was made by sowing the seed on lands not artificially irrigated, and so far as their results can be trusted were not satisfactory. This, however, was most probably due to the exceptional nature of last season, and though the experiments so far do not uphold *Mr. Forbes's theory*† that the plant will thrive well on the high-lying *anicut* paddy lands of this district, I do not consider that the results obtained establish the contrary. The column of remarks contains the Tahsildars' opinions, and you will observe that the Tahsildar of Kurumbranad, who himself conducted an experiment, thinks "it will produce abundantly in Punjah land," and the Tahsildar of Kottayam is of opinion that it "will bear very well in Poumu land." I received the paddy sent to me with your Memorandum, No. 966, dated 20th ultimo, and will take care that experiments are instituted to settle this point.
	7.	Tenicherry Parera.	20 measures.	15th June 1866.	Rather dry sandy soil.	2 Nay measures.	20	2nd June 1866.	In beds	1st July 1866.	27	150	2nd October.	15 Nay measures.	The extent of the land alluded to in the Column 1 and 2, under the Heading "Area occupied by crop," was thus worded thus for ease. Proper manured, and then sown. The germinated seed was sown 5 inches apart, and all turned. Some the plants, when grown to the height of two feet, and the latter end of August, were destroyed at the root by white-ants. The planting up to the date of reaping were not three feet high. The outturn 15 Nay mea-

Statement showing the result of culture, &c.—(Continued.)

Taluk.	Amsam.		Name of cultivator.	Amount sown.		Soil.	Date of sowing.	Broadcast or in beds.	If transplanted, Date.	Area occupied by crop.		When cut.	Outturn seers.	Remarks.
				Rupees weight.	Seers.					Feet, north and south.	Feet, east and west.			
Kottayam.	Tiruvengad...	6.	Puthenpurayil Kelu Vydier.	Was not weighed.	1 Nay.....	Dry Charal Paramba.	In the month of May 1866.	Inbeds.	Not transplanted.	12	10	...	...	sures, 12 consisting of merely husks, and 3 of substantial grains. The paddy has not attained the original light-yellow colour, and the grain the natural solidity. There was only one straw for each grain. None of the plants of country paddy styled Vay-noky, sown by me on high ground far and near the spot occupied by Carolina paddy, have been eaten by white-ants. The root of the last mentioned paddy is rich. The seed delivered to me for experiment should have been sown on a wet soil or in a bed well manured, where cabbage, &c., are yearly sown, and the result would, in my humble opinion, have been happy. Some of the stems of Carolina paddy plants begin to shoot up again after the reaping. They will be removed and sown, say, transplanted, on a plot of rice-field. I presume that the stumps will, by continual irrigation, come to perfection. The cost of culture of Carolina paddy amounted to no less than 12 annas. The produce of country paddy sown on high ground, as above stated, is fourfold, but the 3 Nay measures of Carolina paddy, sown on a similar soil, has fetched no more than 3 Nay measures.
										1	20			
	Do.	7.	Thekavittil Rappu.	Do.	Do.	Dry or Punjah land.	Date not certain.	Do.	Do.	30	20	...	...	The monsoon set in very late; the seeds perished.
										6	00			
	Tellicherry...	8.	Puthiavittil Ambu Nayar.	Do.	Do.	Dry Charal Paramba.	In the month of May 1866.	Do.	Do.	12	10	...	...	The sixth day after sowing the seeds sprouted in some places, and after the tenth day they were withered away.
										1	20			
	Tiruvengad...	9.	Edathil Chandu Nair.	Do.	Do.	Do.	Do.	Do.	Do.	12	10	...	...	The same remarks as above.
										1	20			
	Nittoor.....	10.	Edatha Kannan Menon.	Do.	Do.	Dry Punjah.	Do.	Do.	Do.	31	24	...	...	The monsoon set in very late; the seeds perished.
										7	44			
	Do.	11.	Moorkoth Krishna Menon.	Do.	Do.	Do.	Do.	Do.	Do.	35	20	...	...	
										7	00			
	Tiruvengad..	12.	Kuripengad Kungen Adiyodi.	Do.	Do.	Dry Charal Paramba.	Do.	Do.	Do.	12	10	...	...	The seventh day after sowing the seeds sprouted in some places, and after the fifteenth day they were withered away.
										1	20			
	Pancor.....	13.	Pydel Nambiar Adigary.	Do.	½ Seer.	Dry land.	30th July 1866.	Do.	Do.	12	12	20th October 1866.	½	The outturn of the Carolina paddy will be generally more than of the country paddy. The monsoon set in very late, and the seeds were not sown in time, but after they were sown there being much rain almost all the seeds perished except a few (one-sixteenth part) which were reaped when ripe. The Tahsildar thinks that this paddy will bear very well in Punam land, and he, therefore, secured the seeds he has got for experiment in such land.
										1	12			
	Do.	14.	Wharhi Kunhi Chatan.	Do.	Do.	Do.	22nd do.	Do.	Do.	12	12	16th do.	½	
										1	44			
	Kadiroor	15.	Koodathrone Bappu.	Do.	½ Seer.	Dry sandy soil.	27th do.	Do.	Do.	6	6	13th do.	¾	
											36			
Ashambaud.	Arakilad	16.	Poradan Cherija Kutty Kurup.	Do.	2½ Veesham.	Nunjai.	17th June 1866.	Do.	14th July 1866.	12	18	12th do.	½	The seeds received and sown in the month of June. If they were sown in May in this part of the country, there would have been the outturn more than the present. The Tahsildar sown the Carolina seeds in the land from which one crop is taken in a year. The other individuals raised the crop in land from which two crops are taken for a year. The Tahsildar states that it appears to him, by the nature of the Carolina seed, that is will produce abundantly in the punjah land, and not in the nunjah land. Considering the amount of the outturn he obtained, he thinks the seed will fetch an outturn favorably if it is sown in punjah land. The crop raised by Pulari Ambu Kuruppa did not fill properly.
										2	16			
	Dadagara	17.	[illegible]	Do.	4 do.	Do.	10th do.	Do.	Do.	21	16½	20th do.	3	
										34	6½			
	Do.	18.	Eramara Kurupu.	Do.	2½ do.	Do.	16th do.	Do.	Do.	12	24	18th do.	3	
										2	88			
	Pothayanam	19.	Poolary Ambu Kuruppa.	Do.	3 do.	Do.	18th Dec. 1866.	Do.	15th do.	21	24	20th do.	...	
										5	04			

(Signed) W. LOGAN,
Sub-Collector.

TELLICHERRY,
1st May 1867.

ENCLOSURE No. 3.

Statement showing the result of the culture of Carolina Paddy in the Sub-division of Anjarakandy.

Taluk.	Amshom.	Name of cultivator.	AMOUNT SOWN.		Soil.	Date of sowing.	Broadcast, or in beds.	If transplanted, date.	AREA OCCUPIED BY CROP.		When cut.	Outturn Seers.	Remarks.
			Rupees Weight.	Seers.					Feet, North and South.	Feet, East and West.			
Cherrikel.	Anjara-kandy.	F. C. Brown.	Rs. 48	Weight. ½ a Seer.	Red, of medium fertility.	23rd June 1866.	Broad-cast.	Not trans-planted.	Feet. 74	Feet. 40	From Oct. 6th *to*, 18th.	Seers 3 and 3¼, Good 2¾, Chaff 1 Seer.	The annual rains of 1866, although very late in setting in, fell so seasonably and so moderately from the middle of June to the end of October, as to produce a four months' paddy crop in North Malabar, quite unexampled for its exuberance either within my memory, or in the memory of my native friends and neighbours. Authentic instances have been mentioned in which the return was 30, 40, and even 50 fold to one of seed, in place of the ordinary return of 10, 12 and 15. The return of the Carolina paddy was 2¾ seers of good grain to ½ a seer of seed sown. The Chaff was 1 seer, a large quantity proportionally, which I trace to my having grown the sample just as the natives grow native paddy, without any unusual preparing or manuring of the soil. I only selected *an ordinary spot* near my house, convenient for artificial irrigation from the river running by, and so near the high road that every passer by could easily step *aside, and see the experiment going on without trouble or delay.* This course disarmed suspicion and begot confidence in its object. *No sooner did the Carolina paddy attain a height of 18 inches to 2 feet, than the size and vigour of the stems began to attract public attention without any special invitation on my part. The feeling became, I may say, general, as soon as the stems flowered as the size of the ears was gradually developed, and the grains swelled and ripened. Not a farmer nor cultivator passed, I believe, without stopping and examining the "Europe paddy."* All were struck with the luxuriant fulness of the ears, the size and length of the grains, their tenacious adherence to the stems, and with the height, diameter, and the strength of the straw. Different from native paddy, no ripening grains fell to the ground, not a stem of the Carolina was laid until the crop was reaped, producing straw of first-rate quality. The experiment, in short, was a complete success in exciting the attention and admiration of all the growers who saw the paddy when growing, or examined the ears, grains and straw when reaped. All are anxious for seed. My opinion is, that the Carolina paddy is the most valuable gift which the English have as yet made to South India, during the 100 years they have possessed the country. The farmers of Malabar are acquainted with 120 known varieties of cultivated paddy; from the crops which ripen in eighty and ninety days from the time of sowing, to crops which take six and even eight months to mature. A newspaper writer stated last week, that the Coromandel farmers are acquainted with no fewer than 200 varieties. I am not aware that more than five or six varieties of wheat, the staff of life of Europe, distinguished in common parlance into winter wheats and spring wheats, are known to the scientific and energetic agriculturists of England and Scotland. The production, the introduction, and the diffusion of 200 varieties of a cereal, which was found to be the staff of life throughout India and throughout Asia, at the time that travel and history first made Europeans acquainted with the vast civilised population inhabiting those Continents, give to the scientific agriculture of India a commencement and a date perfectly fabulous. Before the remoteness of this date, the antiquity of the stoneage, authenticated as it is by the numerous discoveries are being brought to light both in England and on the Continent of Europe, becomes a comparitively recent æra in human chronology. I shall add only two more remarks as deserving attention. The first is, that wild paddy, a very singular plant, is indigenous to Malabar, and a great pest to the farmer; whereas in no part of the world visited by travellers, has any European cereal been found growing in a wild state. The second remark is, that the late general and unprecedented seven months' drought and famine have been followed, in all the countries watered by the south-west monsoon, (which in the total rainfall has been under the annual average,) by grain crops of unexampled abundance. There seems to be a manifest connection between the general and unusual physical fact with the general and unusual agricultural plenty; but I have quite failed in tracing satisfactorily what the obscure and hidden link of that connection is.

(Signed) F. C. BROWN.

ANJARAKANDY,
November 1866.

1. Ordered that the foregoing letter, with its enclosures, be submitted to Government, in continuation of the Board's Proceedings, dated 21st March 1867, No. 1,740. A copy will also be forwarded to the Agri-Horticultural Society and the Farm Committee.

2. The experiment in the Malabar district has, on the whole, been attended with marked success.

3. The Board are much obliged to Mr. Brown for his interesting report.

(True Copies and Extract.)

To the Secretary to Government, Revenue Department.
Copy to the Agri-Horticultural Society.
" to the Farm Committee.
" to the Collector of Malabar,
with enclosures returned.

Secretary.

Reverted to England
per 20th July No 43 of 1867
Mis.

Rev. 1867. Department.
Progress for July

No. 1743.

PROCEEDINGS OF THE BOARD OF REVENUE,

Dated 3rd July 1867.

Rec'd 9th do
Ans'd 9th.

No. 4,143.

Submitting with remarks letter from Collector of Malabar forwarding reports of Sub Collector and Mr Brown on cultivation of Carolina Paddy in the Sub division of district.

V. 2219-2220.

Entered 13 July
Order

310 July 1867

Bd. 1860

Extract from the Proceedings of the Right Hon'ble the Secretary of State for India

No. 1743

13th July 1867

In Copies Letter Rec'd 15th