1201

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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

REVENUE DEPARTMENT

G.O. No.	1201	Press
~~B.P. No.~~		~~Mis.~~
Dated	23-9-1874	196 .

Not to be folded or roughly handled

Read the following :—

No. 193. Proceedings of the Board of Revenue, dated 18th August 1874, No. 2,303.

Read again Board's Proceedings, dated 12th September 1873, No. 1,81

Read also the following letters :—

From the President, Local Fund Board,	Ganjam,	dated	13th May	1874, No.	1,179.
,, ,, ,,	Vizagapatam,	,,	4th June	,, ,,	795.
,, ,, ,,	Godavery,	,,	27th ,,	,, ,,	56.
,, ,, ,,	Kistna,	,,	1st July	,, ,,	66.
,, ,, ,,	Nellore,	,,	21st April	,, ,,	485.
,, ,, ,,	Cuddapah,	,,	29th June	,, ,,	379.
,, ,, ,,	Bellary,	,,	21st May	,, ,,	152.
,, ,, ,,	Kurnool,	,,	22nd ,,	,, ,,	177.
,, ,, ,,	Chingleput,	,,	17th Dec.	1873, ,,	96.
,, ,, ,,	North Arcot,	,,	7th May	1874, ,,	246.
,, ,, ,,	South Arcot,	,,	23rd April	,, ,,	34.
,, ,, ,,	Tanjore,	,,	27th ,,	,, ,,	107.
,, ,, ,,	Trichinopoly,	,,	27th April	1874, No.	24.
,, ,, ,,	Madura,	,,	15th May	,, ,,	36.
,, ,, ,,	Tinnevelly,	,,	1st Dec.	1873, ,,	686.
,, ,, ,,	Coimbatore,	,,	25th Oct.	,, ,,	248.
,, ,, ,,	Salem,	,,	27th Jan.	,, ,,	71.
,, ,, ,,	South Canara,	,,	8th May	1874, ,,	345.
,, ,, ,,	Malabar,	,,	19th ,,	,, ,,	75.
,, Superintendent, Government Farms,		,,	18th April	,, ,,	251.
,, Secretary, Agri-Horticultural Society,		,,	27th May	,, ,,	276.
,, Superintendent, Central Jail,	Rajahmundry,	,,	22nd June	,, ,,	217.
,, ,, ,,	Salem,	,,	20th April	,, ,,	185.
,, ,, ,,	Coimbatore,	,,	21st ,,	,, ,,	52.
,, ,, ,,	Cannanore,	,,	19th ,,	,, ,,	254.
,, ,, Madras Penitentiary,		,,	29th ,,	,, ,,	383.
,, ,, Ootacamund Jail,		,,	30th ,,	,, ,,	1,384.

With the Proceedings above quoted, copies of the precis circulated by the Department of Agriculture, Revenue, and Commerce, on the subject of the value of poudrette as a manure, were furnished to all Presidents of Local Fund Boards and Superintendents of Central Jails, the Superintendent, Government Farms, and Secretary, Agri-Horticultural Society, with a view to the institution of careful experiments and submission of accurate reports of the result.

2. From the replies above recorded, it appears that no experiments have been made by Local Fund Boards or Municipalities in any district, except at Coimbatore, where poudrette is applied to the garden in the municipal market after having been buried for a considerable time and deodorized. It appears to be mixed with town-sweepings, leaves, and bones from the meat market, and the results are stated to be "fairly good," but no details are given. The productions of the garden are stated to consist of plantains, English and other vegetables, and Guinea grass. From the Godavery District it is reported that an experiment is being made and will be reported upon hereafter.

3. Several Collectors state that, though the value of poudrette as a manure is well known to Europeans, the natives have a strong prejudice against its use ; and the Secretary to the Agri-Horticultural Society gives as the reason why no experiments have as yet been made in the Society's garden, the difficulty experienced in obtaining men willing to work with this kind of

manure. The Superintendent, Government Farms, states that the experiment made on the Experimental Farms was a failure, owing to the entire absence of rain, from which cause the manure remained almost inactive in the soil.

4. The Board regret to find that no action was taken by Local Fund Boards and Municipalities on the Circular issued; the cause appears to be that, owing to the prejudice against poudrette, there is no demand for the article, and consequently it is not manufactured, but the town-sweepings appear to be freely purchased for manure in many places.

5. In most of the Central Jails, on the other hand, poudrette appears to be freely used, as compulsory labor is available, and experiments can be carried out by its means. The jail officers, whose replies are recorded above, have given the results of their experience, and they will be noticed in turn. Experiments were also made in the garden attached to the Lunatic Asylum at Vizagapatam.

6. *Lunatic Asylum, Vizagapatam.*—In the garden attached to this institution, poudrette was applied to tobacco, the plants so treated being found to thrive better than others grown on ground manured with cow-dung, the leaves being much larger and of a darker color. There was no rain, but the plants were irrigated artificially.

Another experiment was made with cholum, the result being that the plants grew to the height of from ten to twelve feet; but the heads were deficient in size and weight as compared with those grown on land manured with cow-dung, the stalks of which attained the height of from six to eight feet only.

The officer who conducted the experiment is of opinion that the use of poudrette tends very much to increase the growth of straw and diminish the weight of grain, which he thinks may be attributable to the want of rain at the time the experiment was tried.

This result accords with Mr. Halsey's experience as regards the application of poudrette to cereals recorded in the precis circulated.

7. *Salem Central Jail.*—No regular experiments were made, but the jail officer reports that, in the case of a small field of gram treated with poudrette, the crop reaped was of superior quality, and in quantity nearly double that of another crop sown in the same description of soil to which poudrette had not been applied. The manure was simply scattered over the surface of the ground, and then turned into it by means of mamoties.

8. *Cannanore Central Jail.*—The Superintendent gives the result of his experience derived from experiments made at several jails. The process of application which he found most simple and the best for economizing labor was, after carefully digging up and levelling a plot of ground, to cut trenches two feet deep by one wide, the trenches being about two feet apart, then to fill in with night soil direct from the latrines to a depth of eighteen inches, and cover over with soil. The ground thus manured was left for six months, at the expiration of which time, the trenches were dug across to a depth of two feet, and the poudrette was thus thoroughly mixed with the earth, no odour being perceptible.

As regards the value of poudrette as a manure, this officer is of opinion that it is admirably suited for roots, such as turnips, knohl-kohl, sweet-potatoes, but that its suitability for a corn crop is doubtful, as it gives too much straw. He states that fresh poudrette is too hot, and that it should be old, to be of service. As a manure, he considers it a good stimulant, but thinks the soil is exhausted to a great extent by the crop, after the application of poudrette.

9. *Ootacamund Jail.*—The Superintendent states that poudrette has been used as a manure in the jail garden for the last ten years. The yield of the potato crop raised for the last five years is shown in the margin, from which it appears that there has been a great falling off during the last three years; but whether this result is attributable to the constant use of poudrette or to a want of change of crop is not certain. In the latter half of 1871, the ground was allowed to remain fallow. The Superintendent is inclined to believe that the deterioration noticed is due to the constant use of poudrette from the

	Seed sown. lbs.	Crop. lbs.
1869	4,775	24,760
1870	7,000	27,010
1871	2,500	4,579
1872	3,475	7,952
1873	2,500	6,968

circumstance that plots of land in the neighbourhood manured with stable refuse yield two crops per annum, and have continued to do so for many years without, as far as he is aware, any diminution of crop. It is also remarked that, for the last two or three years, the potatoes grown in the jail garden have been very small in size; and that, when the soil refused to yield a crop of potatoes, cauliflowers and cabbages grew extremely well.

10. *Madras Penitentiary.*—Poudrette has been used as a manure for the last two years, the mode of application being the same as that described above by the Superintendent of the Cannanore Jail, namely, the trench system. The soil is described as "light and sandy," and the ordinary country vegetables are said to thrive under the treatment pursued, especially the gourd species. The earth used with the night soil is clay well powdered, its mixture with the sandy soil of the garden producing a kind of light loam.

11. *Rajahmundry Central Jail.*—An experiment was made with poudrette applied to a crop of New Orleans cotton. The soil of the garden is described as of a dry, unproductive kind, consisting of red sand on a stratum of gravel, water being obtainable only at a depth of upwards of eighty feet, and the free use of fertilizers being necessary to render cultivation successful. A piece of ground about 10 acres in extent was chosen and poudrette applied in the manner already described by digging trenches. Three months after the trenches had been prepared in June, cotton was sown in them, and the plants came up with scarcely a single failure. On six acres of the plot they shot up vigorously, but on the remaining four, which were in close proximity to a lime-kiln, they presented a stunted appearance. In November the soil between the plants was dug up with marked benefit to them. In December the pods began to appear, and from the middle of January to the middle of May 812 lbs. of raw cotton were picked, which is stated to be a fair return, considering the very sterile nature of the soil, and the fact of only six acres having given any yield. The Superintendent states that, after giving other methods of culture a fair trial, he is of opinion that with this variety of cotton it is more beneficial to manure the plant than the field. Various kinds of dry grain, gram, maize, cholum, and gingelly were also cultivated with success, the poudrette being placed in shallow trenches of a foot deep, running parallel with each other the whole length of the field, and after six or nine months the ground being ploughed up. A mixture of poudrette and ashes also proved beneficial in the cultivation of country vegetables.

12. It will be observed that the opinions expressed by the officers who have communicated the results of their experience, coincide in a remarkable way with the views expressed in the precis circulated.

To sum up results, it appears that poudrette is not suitable to cereals, but is well adapted for fertilizing root crops and vegetables; secondly, that it should be kept for a considerable time before being used, and that, when applied in a fresh state, it has a tendency to burn up the plant; thirdly, that in treating cotton with this manure, it is more efficacious when brought into contact with the roots of the plant than when used as a top-dressing; fourthly, that there exists a prejudice against the use of this kind of manure amongst the natives, but that they will freely use town-sweepings.

No. 194. Proceedings of the Board of Revenue, dated 31st August 1874, No. 2,459.

Read the following letter from J. R. COCKERELL, Esq., President of the Local Fund Board, Nilgiris, to J. GROSE, Esq., Secretary to the Board of Revenue, dated Ootacamund, 11th August 1874, No. 18:—

WITH reference to Proceedings of the Board of Revenue, No. 1,816, dated 12th September 1873, calling for reports on the value of poudrette as a manure, I have the honor to state that poudrette was first tried in the Ootacamund Municipal

pality about three years ago. This was poudrette simply made up with dry earth. It was found useful in promoting the growth of potatoes, cereals, and grasses.

Poudrette made in the Coonoor Municipality is still manufactured with dry earth only. It is found to be a good fertilizer of coffee, and is readily bought by the Planters in the Coonoor Ghaut.

2. Towards the close of 1872 experiments were made in the Ootacamund Municipality with poudrette containing wood-ash as well as earth. This was tried on red soil and on loams. It was found valuable in stimulating the growth of vegetables, but threw too much leaf.

3. In 1873 attempts were made to improve the quality of poudrette by the admixture of blood and crushed bone. The following is the analysis of this composition by Mr. Broughton, the Government Quinologist:—

In drying it lost water 38·25.
Dried, it contained 22·63 per cent. organic matter and 77·37 per cent. mineral matter.
Of fertilizing matter it contained equivalents to the following:—
Bone-earth 10·28 (4·71 per cent. Phosphoric acid).
Ammonic Sulphate 6·17 (1·59 of Ammonia).
Potassic Carbonate 4·34.

4. Subsequently pulverized burnt bone was used to save the cost of crushing. The analysis made by Dr. Macrae, the Government Chemical Examiner, of this poudrette is as follows:—

As received, one hundred parts yielded—
Water 9·2 at 100°c.
Organic matter 20·6 = between 100°c. and low red heat.
Mineral 70·74.
Ammonia 1·50.
Phosphoric Acid 2·64.
Pottassium 1·91.
Dried at 100°c.
22·028 Organic matter.
77·972 Mineral.
1·65 Ammonia.
2·91 Phosphoric Acid.
2·13 Potassium Chloride.

5. Lieutenant-Colonel Morgan who resides on the Nilgiris and farms, largely writes of the manure:—"All I can say is that your blood and bone poudrette is vastly superior to ordinary poudrette for turnips and probably for other roots." It is believed that, so far as experiment has gone, blood and bone poudrette has proved valuable in Tea and Coffee Plantations.

6. This poudrette sells in the Municipality at Rupees 10 a ton for small quantities and Rupees 7 a ton when larger quantities are taken.

The quantity manufactured last year was 111 tons, all of which was sold. The demand this year has been equal to the supply.

SUBMITTED to Government in continuation of Board's Proceedings, dated 18th August 1874, No. 2,303.

No. 195. ORDER THEREON, 23rd September 1874, No. 1,201.

Miscellaneous.

ORDERED that the foregoing Proceedings of the Board of Revenue be forwarded to the Government of India, with reference to the letter from that Government, dated 13th August 1873.

(True Extract.)

(Signed) C. G. MASTER,
Acting Secretary to Government.

To the Board of Revenue.

Exd. G. A. Turton.

Govt. G.O. 18th August 1874 Agriculture.
F.
REVENUE.
BOARD of REVENUE.
Read the following :—

No. 2,303.

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Read again Board's Proceedings, dated 12th September 1873, No. 1,816.

Read also the following letters :—

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,, ,, ,,	Godavery,	,, 27th ,,	,,	,,	56.
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contact with the root[illegible] plants than when used as a top-dressing; fourthly, that there exists a prejudice against the use of this kind of manure amongst the natives, but that they will freely use town-sweepings.

(A true Extract.)

Acting Sub-Secretary.

To the Acting Secretary to Government, Revenue Department, with original replies.

Copy to all Presidents of Local Fund Boards.
" to the Inspector-General of Jails, Ootacamund.
" to the Superintendent, Central Jail, Rajahmundry.
" to the do. do. Salem.
" to the do. do. Coimbatore.
" to the do. do. Cannanore.
" to the Superintendent of Prisons for the town of Madras, Madras Penitentiary.
" to the Superintendent of Government Farms.
" to the Honorary Secretary, Agri-Horticultural Society.

Exd. A. Gruber.

Received [illegible]

PROCEEDINGS, 18TH AUGUST 1874, No. 2,303.

BOARD OF REVENUE, MADRAS.

AUGUST.

No. 2,303.

Poudrette as a manure.—Replies to Board's Proceedings of 12th September 1873, No. 1,816, on subject of value of—, reviewed, and submitted to Government.

No. 2,459.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 31st August 1874.

Read the following letter from J. R. COCKERELL, Esq., President of the Local Fund Board, Nilgiris, to J. GROSE, Esq., Secretary to the Board of Revenue, dated Ootacamund, 11th August 1874, No. 18:—

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Phosphoric Acid 2·64.
Pottassium 1·91.
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77·972 Mineral.
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2·91 Phosphoric Acid.
2·13 Potassium Chloride.

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SUBMITTED to Government in continuation of Board's Proceedings dated 18th August 1874, No. 2,303.

(A true Copy and Extract.)

Acting Sub-Secretary.

To the Acting Secretary to Government, Revenue Department.
Copy to the President of the Local Fund Board, Nilgiri Circle.

Rd. G. A. Turton.

PROCEEDINGS, 31ST AUGUST 1874, No. 2,459.

Received 4th Sept 1874.

MADRAS.

Board of Revenue

Pursuant 1874.

No 1233

AUGUST.

No. 2,459.

Poudrette— Value of—as a manure.—Report of President, Local Fund Boards, Nilgiris, on — submitted to Government.

Revenue Dept

No. 1207

Proceedings of the Madras Government

Under date the 23 September 1874

Read the following

Proceedings of the Board of

Revenue

Reviewing and transmitting replies to Govt Proceedings relative to the subject of value of Poudrette as a manure

B. E. 15 Aug 26 Sept No 2303

Submitting report of President, Local Fund Boards, Nilgiris, on the value of Poudrette as a manure.

— 6 — 31 — 2459

Ordered that the foregoing Proceedings of the Board of Revenue be forwarded to the Government of India, with reference to the letter from that Government dated 13th August 1873

To the Bd of Revenue Dup 5 Oct 74 with 27 Enclosures

Ex Rev. A. 6 S

193-195