Proceedings of the Madras Government, Revenue Department, 4th July 1871.

No. 34. Read the following Proceedings of the Board of Revenue, dated 21st June 1871, No. 2,489 :—

Read the following letter from the President, Government Experimental Farm, to the Acting Secretary to the Board of Revenue, dated Madras, 23rd May 1871.

With reference to the Proceedings of the Board marginally noted I have the honour to forward a Report from the Superintendent of the Government Farm, giving some general information as to the application of bone-dust as manure which may be interesting to Mr. Borrodaile. It might be useful to place the papers on the Editors' table.

18th April 1871, No. 1,607.

Enclosure No. 1.

From the Superintendent, Government Farm, to the Acting Honorary Secretary, Government Farm Committee, dated Sydapet, 20th May 1871.

With reference to the concluding part of paragraph 3 in the letter of the Collector of Ahmedabad, recorded in the Proceedings of Government, No. 200-201, dated March 1871, I have the honour to observe that bone-dust owes its efficacy to the large percentage of phosphate of lime it contains, and that therefore it produces the best result when applied to soils deficient in phosphate of lime. The percentage of ammonia contained in ground bones differs so greatly, especially in this country, that it is scarcely necessary to take it into account. There are few cultivated soils that contain a sufficiency of phosphate of lime; yet there are some soils on which a dressing of bone-dust produces little effect; thus, on the Cotswold Hills in Gloucestershire there are considerable tracts of such land; analysis shows that these soils contain a considerable percentage of phosphate of lime; but the cultivator can easily, by making one or two field experiments, determine whether or not his soils contain a sufficiency of phosphate of lime for the wants of the crops he grows.

Description of land to which applied.

2. Any quantity from 1 cwt. to 20 cwts. of bone-dust per acre may be applied; economic reasons must decide what weight must be used. It may in one instance be as good policy to apply as much as 20 cwts. per acre, while in another instance 2 cwts. would be too much. As a general rule, heavier dressings may be applied to stiff soils in good condition than to light soils. As if the full effects are not obtained in the first year, they will be obtained in succeeding crops. On sandy soils, especially those resting on a porous sub-soil, it is never safe to apply more manure at a time than will suffice for *one* crop.

Amount per acre.

3. Phosphate of lime is necessary for nearly every cultivated crop, more particularly Maize, Tobacco, Cotton, Cholum, Cumboo, Sorghum, Gram, Ragi, Sugar-cane, Grass, etc.

Description of crop grown.

4. Bone-dust may be applied at any season. I have found it best on our light soils to sow it broad-cast over the land, with the last harrowing before sowing the seed. Top-dressings applied after the crop has appeared above ground are less certain in their effects, unless there is a sufficiency of rain afterwards, the probability is, that the plant will reach maturity before the bone-dust has begun to decompose.

Season at which crop sown.

5. If the bone-dust had been well worked into the soil, "occasional irrigation" will assist its decomposition, and render it more available to the roots of the plants. I top-dressed a

If Winter, whether crop irrigated.

paddy-field with ground bones without any visible result; the fact was, the flooding carried off greater part of the dressing.

6. I have not made any extensive comparative experiments here with bone-dust, but the following made last season may be interesting:—

Maize.—Top-dressed when the plant was about six inches high, with 666 lbs. of bone-dust, at a cost of 18 Rs. per acre. The yield was 1,764 lbs. of grain and 3,294 lbs. of straw. An unmanured plot of similar land only produced 1,350 lbs. of grain and 2,430 lbs. of straw per acre. The cost of the top-dressing was not repaid; this was entirely due to the extraordinary dry state of the weather after the top-dressing was applied. The manures had only begun to decompose when the crop was ready for harvesting.

Comparative yield of such a crop and one unmanured.

Sorghum Saccharatum.—The crop when about two inches high was top-dressed with bone-dust at the rate of nearly 6 cwt. per acre. The weather at the time was very favourable, frequent light showers kept the land moist. The cost of the manure was 18 Rs. per acre. One of the unmanured plots produced at the rate of 976½ lbs. of grain and 15,282 lbs. of straw, and the other 1,183½ lbs. of grain and 17,424 lbs. of straw per acre. One of the top-dressed plots produced 1,908 lbs. of grain and 23,130 lbs. of straw, and the other 1,909 lbs. of grain and 24,696 lbs. of straw per acre. The plots were all of one size, and the soil was of a similar quality. In these experiments the average increase *due to manure* was 869 lbs. of grain and 7,560 lbs. of straw per acre. The cost of manure was repaid, and a considerable profit made.

Submitted to Government in continuation of the Board's Proceedings dated 15th May 1871, No. 2,024.

No. 35. Order thereon, 4th July 1871, No. 1,155.

Miscellaneous.

The Government now only await reply from the General Superintendent, Public Works Stores and Workshops—*vide* Board's Proceedings, No. 1,607, of 18th April last.

(True Extract.)

(Signed) D. F. CARMICHAEL,
Acting Secretary to Government.

To the Public Works Department.
,, the Board of Revenue.

Exd. F. B. Bantleman

Govt. of India.

REVENUE.

To

THE PUBLIC WORKS DEPARTMENT,

&c., &c., &c.

Dated July 4th

Read ,, 1871.

G. G., 4th July 1871, No. 1,155.

JULY.
Nos. 34-35.

Same Dept.—Reply from the General Superintendent, Public Works Stores and Workshops, in connection with it, awaited.

G.O. 15 July 71 No 200-1
Rev 2486 — 100-1

Rev. 1871. Dept.

Board of Revenue,

MADRAS. Jr. 2070

PROCEEDINGS, 21ST JUNE 1871, No. 2,489.

Dept 29 June 71 Encl. 30

Received.

JUNE.

No. 2,489.

Bone dust.—Report from Superintendent of Government Farm containing general information as to application of, as manure, submitted to Government. No 1153

The Govt move only annual Reports from the Gen Supts, Public Works Stores & Workshops — vide Bds Rs 1867 Jr 18 to April Cons.

6 July 71

Vide 2486/71

24 Feb 1871 Bds Rs Jr 5
Mr — Dept Bds Jr 5

Ro 34-35